This product is not manufactured for Iran. SVC Warraty will not be applicable and the user will be responsible for service expenses when the product is used in Iran.

QUESTIONS OR COMMENTS?

COUNTRY	CALL	OR VISIT US ONLINE AT
U.A.E	800-SAMSUNG (800 - 726 7864)	www.samsung.com/ae/support (English) www.samsung.com/ae_ar/support (Arabic)
OMAN	800-SAMSUNG (800 - 726 7864)	
KUWAIT	183-CALL (183-2255)	
BAHRAIN	8000-GSAM (8000-4726)	
EGYPT	08000-726786 16580	www.samsung.com/eg/support
JORDAN	0800-22273 06 5777444	www.samsung.com/Levant/support (English)
MOROCCO	080 100 22 55	www.samsung.com/n_africa/support
SAUDI ARABIA	920021230	www.samsung.com/sa/support www.samsung.com/sa_en/support (English)
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AP50M0✳ Series
AP50M1✳ Series

Air Conditioner
user & installation manual

Planet First 100% Recycled Paper

This manual is made with 100% recycled paper.

imagine the possibilities

Thank you for purchasing this Samsung product.

EN ES FR PT IN AR DB68-03267A-02

SAMSUNG

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Features of your new air conditioner

Strong Turbo/Long Function

Your new air conditioner supports Turbo function which makes you cool fast for 30 minutes and Long function which makes the cool air goes to much further place.

Look for Everywhere

The elegant and harmonious design gives priority to the esthetics of your space and complements any of your existing interior décor. With its soft color and latest design, the new air conditioner adds class to any room. Enjoy what your air conditioner offers both functionally and esthetically.

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Correct Disposal of This Product
(Waste Electrical & Electronic Equipment)

(Applicable in countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

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Safety precautions

Before using your new air conditioner, please read this manual thoroughly to ensure that you know how to safely and efficiently operate the extensive features and functions of your new appliance.

Because the following operating instructions cover various models, the characteristics of your air conditioner may differ slightly from those described in this manual. If you have any questions, call your nearest contact center or find help and information online at www.samsung.com.

Important safety symbols and precautions:

WARNING	Risk of death or serious personal injury.
CAUTION	Potential risk of personal injury or material damage.
CAUTION	To reduce the risk of fire, explosion, electric shock, or personal injury when using your air conditioner, follow these basic safety instructions:
	Do NOT attempt.
	Do NOT disassemble.
	Do NOT touch.
	Follow directions carefully.
	Unplug the power plug from the wall socket.
	Make sure the machine is grounded to prevent electric shock.
	Call the contact center for help.

These warning signs are here to prevent injury to you and others.

Please follow them carefully.

After reading this section, keep it in a safe place for future reference.

WARNING SEVERE WARNING SIGNS

Do not place the air conditioner near hazardous substances or equipment that releases free flames to avoid fire, explosions or injuries.

- ▶ Potential risk of fire hazard or explosion.

Do not install the outdoor unit at an unstable place or elevated surface where there is potential risk of falling.

- ▶ If the outdoor unit falls, it may cause personal injury or loss of property.

Failure or damage may occur if any changes or modification that is not stated in the manual was performed. In this case, user will be responsible for the repair expenses.

Install the air conditioner away from direct exposure to sunlight, heating apparatus, and humid places.

- ▶ Hang curtains on windows to boost cooling efficiency and to avoid the risk of electric shock.

Do not yank the power cable with hands.

- ▶ Potential risk of fire or electric shock.

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Safety precautions

WARNING SEVERE WARNING SIGNS

Never use a damaged or dusted power cable, or loosened power receptacle.

- Potential risk of fire or electric shock.

Install an exclusive circuit breaker and short-circuit breaker for the air conditioner.

- Potential risk of electric shock or fire.

Do not insert anything such as fingers or branches into the air conditioner vents while the air conditioner is running.

- Keep the children away from the air conditioner to prevent them from putting their finger on the air conditioner. Potential risk of personal injury.

Ensure no water gets into the air conditioner.

- Potential risk or electric shock.
- If the water gets into the air conditioner, stop and unplug the power source immediately.

Turn off the air conditioner using the provided remote controller or control accessory (if provided). Do not unplug to turn off the unit (unless there is an immediate danger).

Do not run the air conditioner for an extended period of time in a room with the door closed or with babies, elderly or disabled people.

- Open the door or windows to ventilate your room at least once an hour to prevent oxygen shortage.

The air conditioner is composed of moving parts. Keep children away from the unit to avoid physical injury.

Make sure that children take precautions against access to the air conditioner and they do not play with the unit.

Do not clean the interior of air conditioner on your own.

- You may damage the parts which can cause electric shock or fire.
- Consult contact center for cleaning the interior of the air conditioner.

Do not connect the air conditioner with heating apparatus or attempt to disassemble, remodel or repair it by yourself.

- Potential risk of malfunction, electric shock or fire. If repairs are needed, consult the contact center.

Consult the place of purchase or contact center to install the air conditioner.

- Improper installation carries a risk of unit malfunction, water leakage, electric shock or fire.
- If installing in specialty areas, such as a factory complex or saline coastal area, consult the place of purchase or contact center for specific installation details.
- The units must be installed according to distances declared, in order to permit accessibility from each side, either to guarantee correct operation of maintenance or repairing products. The unit's parts must be reachable and removable completely under safety condition (for people or things).

Consult a dealer regarding the appropriate measures to prevent the allowable concentration from being exceeded.

- If the refrigerant leaks, and cause the concentration limit to be exceeded, hazards due to lack of oxygen in the room may result.

If the indoor unit gets wet, turn the power off immediately and call your nearest contact center.

- Potential risk of fire or electric shock.

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Always make sure that the power supply is compliant with current safety standards. Always install the air conditioner in compliance with current local safety standards.

Verify that the voltage and frequency of the power supply comply with the specifications and that the installed power is sufficient to ensure the operation of any other domestic appliance connected to the same electric lines.

Use a rated circuit breaker only.

► Never use steel wires or copper wires as a circuit breaker. It may cause fire or unit malfunctions.

Do not put undue stress or place heavy object on the power cable.

Do not bend the power cable excessively.

► Potential risk of fire or electric shock.

To protect the product from water and possible shock, you should keep the power cable and the connection cord of the indoor and outdoor units in the protection tube.

Disconnect the air conditioner from power supply before it is repaired or disassembled.

Clean the air conditioner after the inner fan stops operating.

► Potential risk of injury or electric shock.

Use a receptacle that has a ground terminal. The receptacle must be used exclusively for the air conditioner.

► Improper electrical grounding may cause electric shock or fire.

Be sure to ground the unit. Do not connect the ground wire to gas or water pipes, lighting rods, or telephone grounding lines.

► If the unit is not properly grounded, electric shock may result.

If you smell burning plastic, hear strange sounds, or see smoke coming from the unit, unplug the air conditioner immediately and call a contact center.

► Potential risk of fire or electric shock.

CAUTION SIGNS

Do not block or place items in front of the air conditioner. Do not step, hang onto, or place heavy items on the air conditioner.

► Potential risk of personal injury.

If failure or damage occurs on the conditions of improper use not followed by the manual, there will be an extra labor charge for installing and construction.

► Potential risk of malfunction, electric shock or fire if repairs or installations are attempted by a non-qualified service technician.

Do not spray flammable gases such as insecticide near the air conditioner.

► Potential risk of electric shock, fire or unit malfunction.

Do not open the front panel during operation.

► Potential risk of electric shock or unit malfunction.

Cool air should not flow directly towards people, pets, and plants.

► It is harmful to your health, pets, and plants.

Do not drink drain water coming out of the air conditioner.

► Potential risk of health hazard.

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Safety precautions

CAUTION SIGNS

Do not allow children to climb on the air conditioner.

Do not use the air conditioner as a cooling precision instrument for food, pets, plants, cosmetics or machinery.

Do not pull or give excessive shock to the air conditioner.

- ► Potential risk of fire, or unit malfunction and there are risk of personal injury because unit may fall down.

Do not spray water directly on the air conditioner or use benzene, thinner or alcohol to clean the surface of the unit.

- ► Potential risk of electric shock or fire.
- ► Potential risk of damage to the air conditioner.

Do not place any objects, especially containers with liquid.

Do not touch the pipe connected to the air conditioner.

Install the indoor unit away from lighting apparatus using the ballast.

- ► If you use the wireless remote controller, reception error may occur due to the ballast of the lighting apparatus.

Install the outdoor unit where operating noise and vibration will not disturb your neighbor and in a well-ventilated area with no obstacle.

- ► Potential risk of malfunction.
- ► Operating noise may disturb your neighbor.

Make sure that there are no obstacles or covers that block the air conditioner.

Allow sufficient space for air circulation.

- ► Insufficient ventilation may result in poor performance.

If the power cable is damaged, the manufacturer or a qualified service technician must replace it.

If a power outage occurs while the air conditioner is working, turn off the power source immediately.

Max current is measured according to IEC standard for safety and current is measured according to ISO standard for energy efficiency.

Check for damage on delivery. If damaged, do not install the air conditioner and call the place of purchase immediately.

Keep indoor temperatures stable and not extremely cold, especially where there are children, elderly or disabled people.

The packaging material and used batteries of the remote controller (optional) must be disposed of in accordance with the national standards.

The refrigerant used in the air conditioner must be treated as chemical waste. Dispose the refrigerant following national standards.

Have a qualified service technician install the air conditioner and perform a trial operation.

Firmly connect the drain hose to the air conditioner for proper water drainage.

Check for damages on the outdoor unit installation pad at least once a year.

- ► Potential risk of personal injury or property loss.

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When using a wireless remote controller, the distance should not be more than 7 meters from the air conditioner.

If the remote controller is not used for a long period of time, remove the batteries to prevent leakage of electrolyte.

When cleaning the outdoor unit, touch the heat exchanger radiator fins with extreme care.

► Wearing thick gloves can protect your hands.

Make sure that the condensed water dripping from the drain hose runs out properly and safely.

The appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety: Young children should be supervised to ensure that they do not play with the appliance.

Inspect the condition, electric connections, pipes and external case of the air conditioner regularly by a qualified service technician.

Do not open doors and windows in the room being cooled during operation unless necessary.

Do not block the air conditioner vents. If objects block the air flow, it may cause unit malfunction or poor performance.

The air conditioner should be used only for the applications for which it has been designed: the indoor unit is not suitable to be installed in areas used for laundry.

Ensure the off-on and protection switches are properly installed.

Do not use the air conditioner if damaged. If problems occur, immediately stop operation and disconnect the plug from the power supply.

If the air conditioner will not be used for an extended period of time (for example, over several months), unplug the power from the wall.

Call the place of purchase or a contact center if repairs are needed.

► Potential risk of fire or electric shock if disassembly or repairs are attempted by a non-qualified service technician.

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Viewing your air conditioner

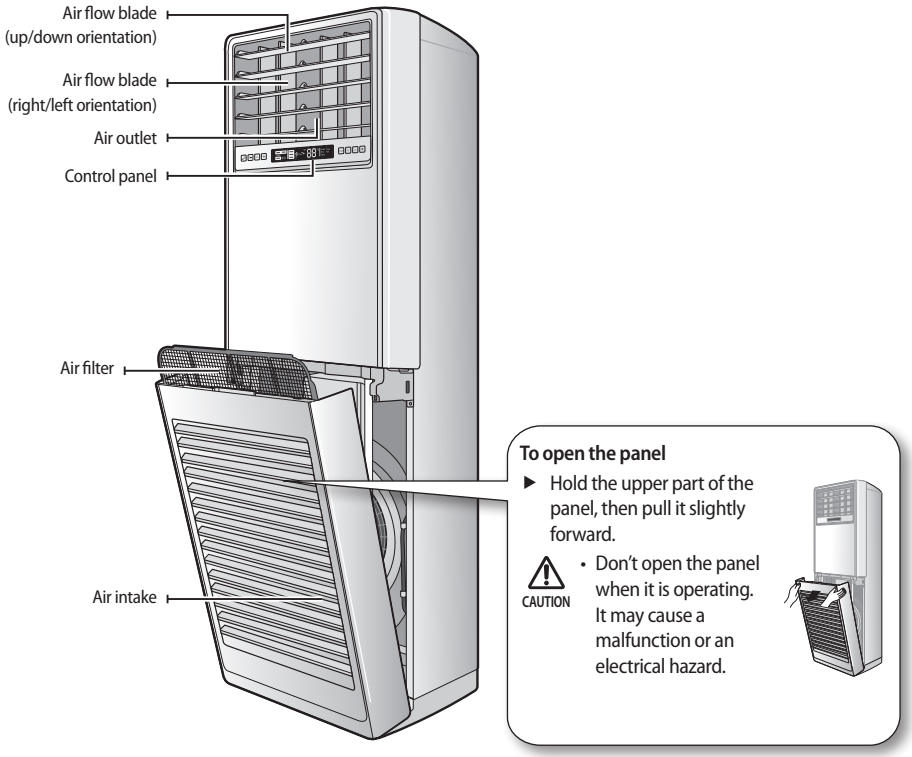
Congratulations on the purchase of the air conditioner. We hope you enjoy the features of your air conditioner and stay cool with optimal efficiency.

Please read the manual to get started and to make the best use of the air conditioner.

Checking the indoor unit and display

Carefully unpack your air conditioner and check the indoor unit to make sure it is not damaged.

Main parts


Air flow blade
(up/down orientation)
Air flow blade
(right/left orientation)
Air outlet
Control panel
Air filter
Air intake
To open the panel
▶ Hold the upper part of the panel, then pull it slightly forward.
CAUTION
• Don't open the panel when it is operating. It may cause a malfunction or an electrical hazard.

NOTE Your air conditioner may slightly look different from illustration shown above depending on your model.

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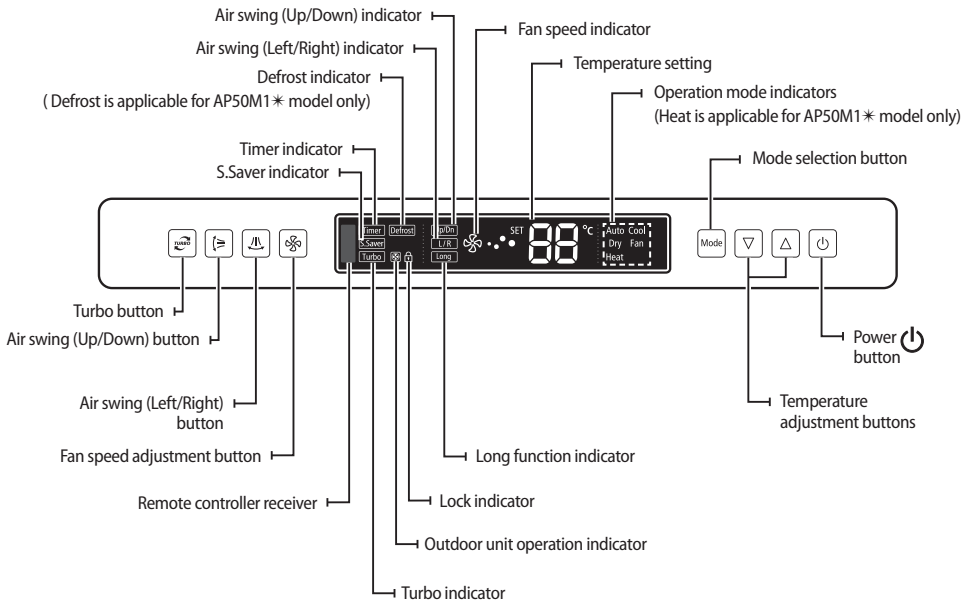
Control panel

You can operate the air conditioner with the control panel when you can't or don't want to operate the air conditioner with the remote controller. (see pages 24~25)



NOTE Heater and Purity function is not supported by this model.

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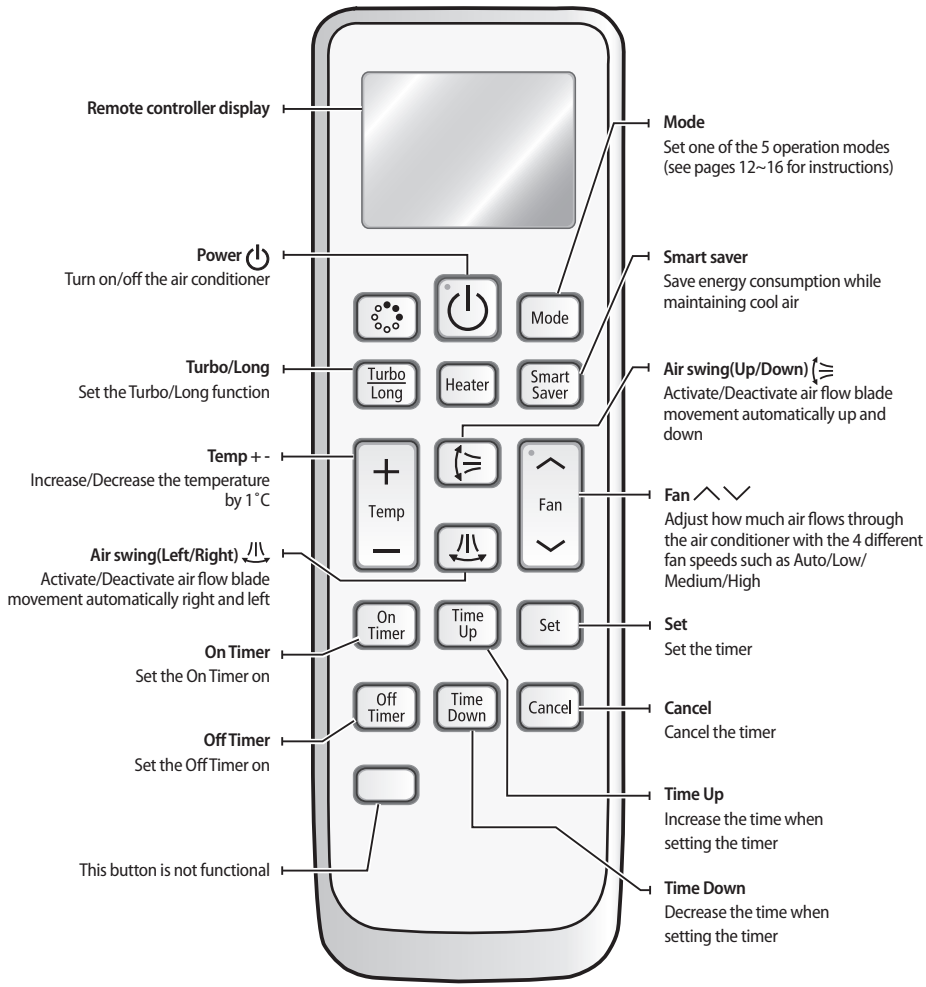
Viewing your air conditioner

Checking the remote controller

You can activate the air conditioner by pointing the remote controller away from it. When using the remote controller, always point it directly at the air conditioner.



NOTE

- When you press the button, a short ring will sound and a transmit indicator( )appears on the remote controller display.
- Heater and Purity functions are not supported by this model.
- Remote controller will remember the most recent temperature setting if you turn off the air conditioner and then turn it on again.

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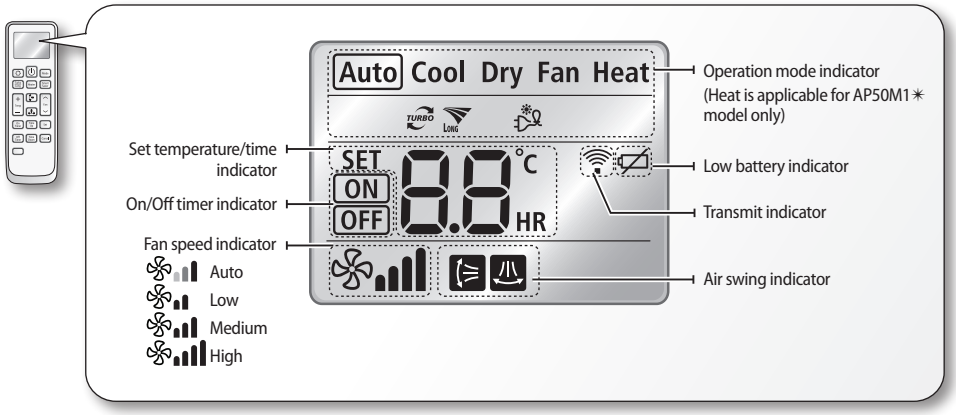
Remote controller display



Using the remote controller

Point the remote controller towards the remote controller receiver of the indoor unit (see page 9 to find the location of remote controller receiver).

When you properly press the button on the remote controller, you will hear ring sound from the indoor unit.

NOTE

- The signal may not be received well of electronic lighting style fluorescent lamps such as inverter fluorescent lamps are in the same space.
- If other electrical products operate by the remote controller, call your nearest contact center.

Installing the batteries

1. **Push the lever as arrow indicates on the rear side of the remote controller and pull up.**
2. **Insert two AAA batteries.**
   Check and match the "+" and "-" signs accordingly. Make sure you have inserted the batteries in correct position.
3. **Close the cover by place it back to its original position.**
   You should hear click sound when the cover is locked properly.

ENGLISH

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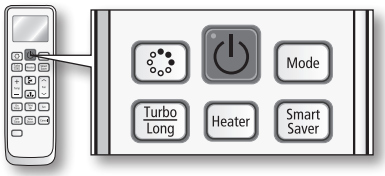
Operating basic function

Turning the air conditioner on and off

Press the **Power** button on the remote controller.
You will hear a ring and the air flow blade will move automatically when the air conditioner is properly on. The air conditioner will operate in the most recent operation mode used or Auto mode.
When you turn off the air conditioner, air flow blade will stop moving.



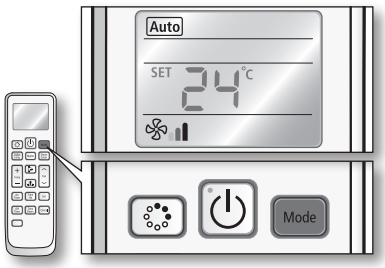
NOTE **Turning on/off your air conditioner without the remote controller.**
You can operate your air conditioner by pressing the **Power** button on the indoor unit control panel.

Selecting operation mode

Auto

In Auto mode, the air conditioner will automatically set the temperature and fan speed depending on the room temperature detected by the room temperature sensor.

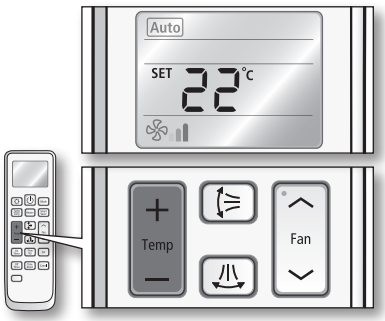
1. Turn on the air conditioner.
   Press the **Power** button on the remote controller.
2. Set the operation mode.
   Press the **Mode** button on the remote controller until Auto mode and Auto fan speed indicator appear on the remote controller display.
   The air conditioner will automatically set the operation mode to Cool depends on the room temperature.



NOTE Each time you press the **Mode** button, the mode will change in order of Auto, Cool, Dry, Fan and Heat*. (*Heat mode is applicable for AP50M1✳ model only.)

3. Adjust the temperature (if you need to increase or decrease the room temperature).
   Press the **Temp** + or - button on the remote controller to increase or decrease the desired temperature.
   You can set the desired temperature between the range of 18˚C~30˚C.

NOTE You can increase/decrease the temperature by 1˚C.



NOTE
- While the air conditioner is already operating in another mode, press the **Mode** button until Auto mode indicator appears on the remote controller display.
- When you are using the remote controller, make sure correct indicator which matches your selection appears on the remote controller display.
- Air flow can be adjusted manually (see page 20 for instructions).

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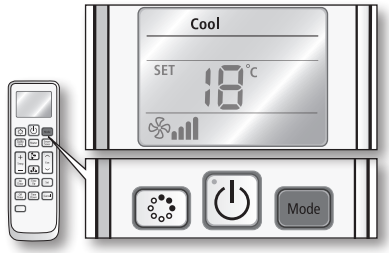
Cool

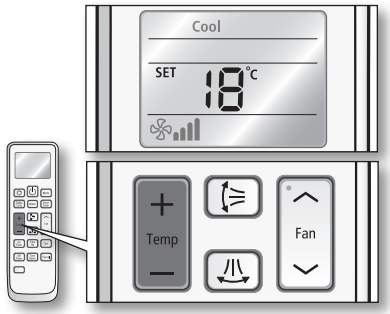
In Cool mode, the air conditioner will cool your room. You can adjust the temperature and the fan speed to feel cooler in hot season.

1. Turn on the air conditioner.
   Press the **Power** ⏻ button on the remote controller.
2. Set the operation mode.
   Press the **Mode** button on the remote controller until Cool mode indicator appears on the remote controller display.
   The air conditioner operates in Cool mode and it will lower the temperature in your room.



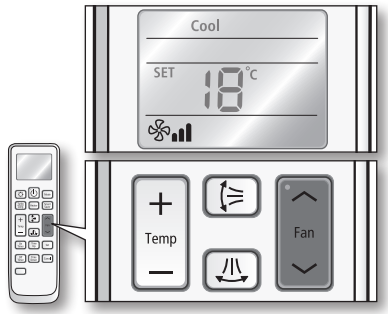
NOTE Each time you press the **Mode** button, the mode will change in order of Auto, Cool, Dry, Fan and Heat*. (*Heat mode is applicable for AP50M1✳ model only.)

3. Set the temperature.
   Press the **Temp** + or - button on the remote controller to increase or decrease the desired temperature.
   You can set the desired temperature between the range of 18˚C~30˚C.



NOTE You can increase/decrease the temperature by 1˚C.

4. Set the fan speed.
   Press the **Fan** ∧ or ∨ button on the remote controller to set the desired fan speed.
   If room temperature reaches desired value, the air conditioner will shut off cooling for a while and just the fan runs.



NOTE Each time you press the **Fan** ∧ or ∨ button, fan speed will change in order of Auto, Low, Medium and High.

NOTE
- While you are using the remote controller, make sure correct indicator which matches your selection appears on the remote controller display.
- Air flow can be adjusted manually (see page 20 for instructions).
- If current outside temperatures are much higher than the selected indoor temperature, it may take time to bring the inner temperature to the desired coolness.
- If you operate the air conditioner right after stopping the cooling operation or the temperature reaches to the desired temperature, cool air will not come out around 3 minutes for compressor protection.

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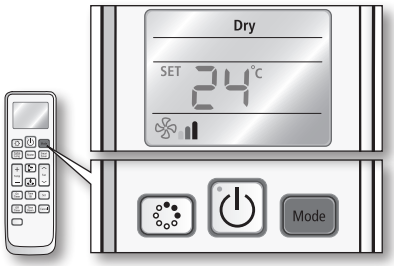
Operating basic function

Dry

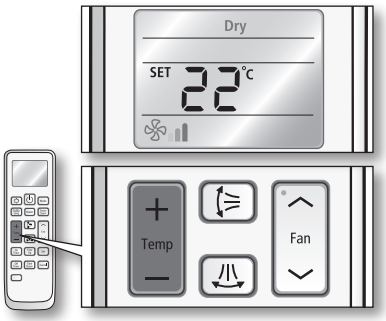
The air conditioner in Dry mode acts like a dehumidifier by removing moisture from the indoor air. Dry mode makes the air feel refreshing in a humid climate.

1. Turn on the air conditioner.
   Press the **Power** ⏻ button on the remote controller.
2. Set the operation mode.
   Press the **Mode** button on the remote controller until Dry mode indicator appears on the remote controller display.
   The air conditioner operates in Dry mode and automatically adjust the fan speed to Auto.



NOTE Each time you press the **Mode** button, the mode will change in order of Auto, Cool, Dry, Fan and Heat*. (*Heat mode is applicable for AP50M1✳ model only.)

3. Set the temperature.
   Press the **Temp** + or - button on the remote controller to increase or decrease the desired temperature.
   You can set the desired temperature between the range of 18˚C~30˚C.



NOTE You can increase/decrease the temperature by 1˚C.

NOTE
- While you are using the remote controller, make sure correct indicator which matches your selection appears on the remote controller display.
- Air flow can be adjusted manually (see page 20 for instructions).

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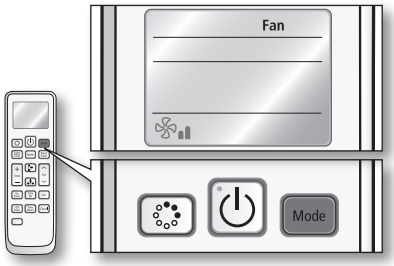
Fan

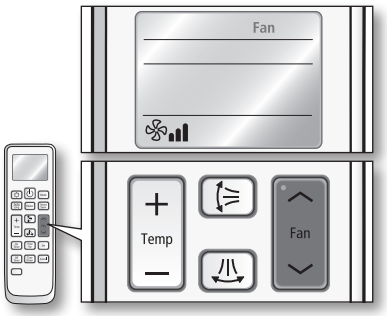
Fan mode can be selected to ventilate your room. Fan mode will be helpful to refresh the stale air in your room.

1. Turn on the air conditioner.
   Press the **Power** ⏻ button on the remote controller.
2. Set the operation mode.
   Press the **Mode** button on the remote controller until Fan mode indicator appears on the remote controller display.
   The air conditioner operates in Fan mode and circulate the indoor air.



NOTE Each time you press the **Mode** button, the mode will change in order of Auto, Cool, Dry, Fan and Heat*. (*Heat mode is applicable for AP50M1✳ model only.)

3. Set the fan speed.
   Press the **Fan** ∧ or ∨ button on the remote controller to set the desired fan speed.



NOTE Each time you press the **Fan** ∧ or ∨ button, fan speed will change in order of Low, Medium and High.

NOTE
- While you are using the remote controller, make sure correct indicator which matches your selection appears on the remote controller display.
- Air flow can be adjusted manually (see page 20 for instructions).

ENGLISH

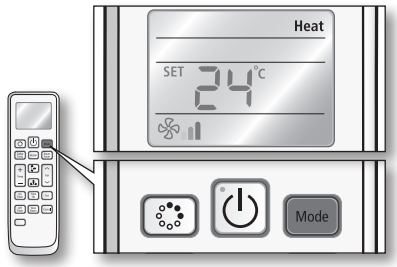
Mirage_AP50M0@_IBIM_EN_03267A-02.indd 15 2014-09-18 오후 5:00:49

Operating basic function

Heat (Only applicable for AP50M1✳ model)

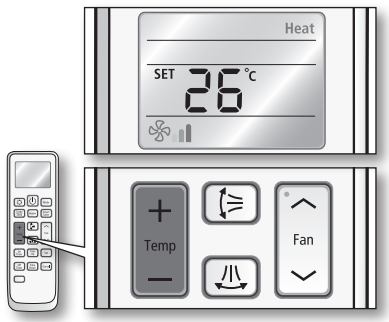
The air conditioner heats as well as cools. Warm your room with this versatile appliance in the cold of winter.

1. Turn on the air conditioner.
   Press the **Power** ⏻ button on the remote controller.
2. Set the operating mode.
   Press the **Mode** button on the remote controller until Heat mode indicator appears on the remote controller display.
   The air conditioner operates in Heat mode and warms your room.



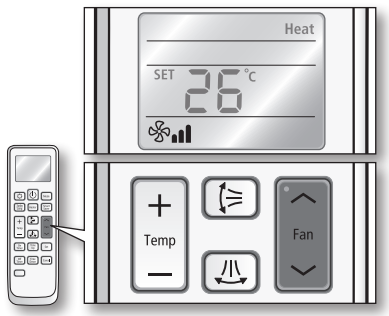
NOTE Each time you press the **Mode** button, the mode will change in order of Auto, Cool, Dry, Fan and Heat.

3. Set the temperature.
   Press the **Temp** + or – button on the remote control to increase or decrease the desired temperature.
   You can set the desired temperature between the range of 16˚C~30˚C.



NOTE You can increase/decrease the temperature by 1˚C.

4. Set the fan speed.
   Press the **Fan** ∧ or ∨ button on the remote controller to set the desired fan speed.
   If room temperature reaches desired value, heating will stop for a while.



NOTE
- Each time you press the **Fan** ∧ or ∨ button, fan speed will change in order of Auto, Low, Medium and High.
- Fan may not operate for about 3~5 minutes at the beginning to prevent any cold blasts while the air conditioner is warming up.

NOTE
- Air flow can be adjusted manually (see page 20 for instructions).
- Since the air conditioner heats the room by taking heat energy from outdoor air, the heating capacity may decrease when outdoor temperature is extremely low. Use an additional heating appliance in combination with the air conditioner if you feel the air conditioner heats insufficiently.
- Frost may form in outdoor unit during Heat mode. Defrost indicator Defrost will light up on the indoor unit display when the outdoor unit starts removing frost and it will disappear when the operation is done.

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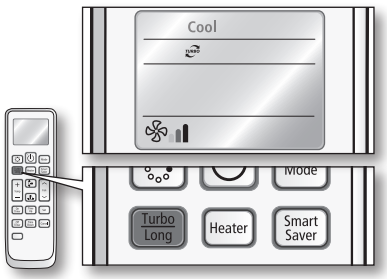
Using advanced functions

Using the Turbo function

Turbo function will be helpful to cool or heat your room quickly and effectively by operating at the maximum fan speed for 30 minutes.

1. Turn on the air conditioner.
   Press the **Power** ⏻ button on the remote controller.

2. Set the operation mode.
   Press the **Turbo/Long** button on the remote controller once. Turbo indicator will appear on the remote controller display.
   The air conditioner operates in High fan speed and automatically adjusts the temperature according to the current room temperature. The unit operates for 30 minutes and then operates in last used mode or in Auto mode if Dry/Fan mode is most recent mode used.



NOTE
- Turbo function is only available in Auto/Cool/Heat* mode.
  (*Heat mode is applicable for AP50M1✳ model only.)
  If Turbo function is selected in Dry/Fan mode, operation mode changes to Auto.
- You cannot use Turbo and Long function at the same time.

To deactivate Turbo function

1. Press the **Turbo/Long** button on the remote controller twice while Turbo function is on.
   The air conditioner operates in last used mode or in Auto mode if Dry/Fan mode is most recent mode used.

NOTE
- While you are using the remote controller, make sure corresponding indicator appears on the remote controller display.
- Temperature/Fan speed cannot be adjusted while using this function.
- Air flow can be adjusted manually (see page 20 for instructions).
- If you press the **Mode** button while the Turbo function is on, it will cancel the function.

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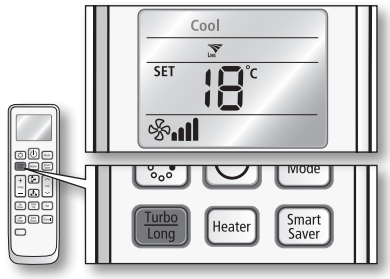
Using advanced functions

Using the Long function

Long function will be helpful when you want the cool or warm air to go to much further place.

1. Turn on the air conditioner.
   Press the **Power** ⏻ button on the remote controller.

2. Set the operation mode.
   Press the **Turbo/Long** button on the remote controller twice. Long indicator will appear on the remote controller display.
   The air conditioner operates in High fan speed and you can adjust the desired temperature.



NOTE

- Long function is only available in Auto/Cool/Heat* mode.
  (*Heat mode is applicable for AP50M1✳ model only.)
  If Long function is selected in Dry/Fan mode, operation mode changes to Auto.
- When using Long function, the air flow blades face upward and vertical air flow direction control is not possible.
- You cannot use Turbo and Long function at the same time.

To deactivate Long function

1. Press the **Turbo/Long** button on the remote controller while Long function is on.
   The air conditioner operates in last used mode, or in Auto mode if Dry/Fan mode is most recent mode used.

NOTE

- While you are using the remote controller, make sure corresponding indicator appears on the remote controller display.
- Press **Temp** + or - button to adjust desired temperature. Each time you press the button, the temperature changes by 1°C.
- Fan speed is set as High only and cannot be adjusted in Long function.
- In Long function, air flow can be adjusted in horizontal direction only (see page 20 for instructions).

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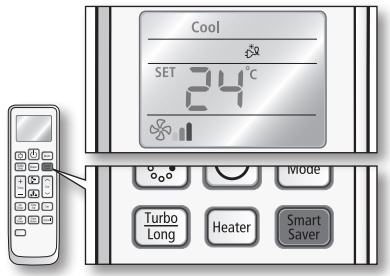
Using the Smart Saver function

This function will set the temperature range limit to help you save energy while the air conditioner is operating in Cool mode.

1. Press the **Smart Saver** button on the remote controller while the air conditioner is operating in Cool mode.
   Smart Saver indicator appears automatically on the remote controller display.



NOTE

- Smart Saver function is only available in Cool mode and when Smart Saver function is canceled, air conditioner will operate in Cool mode.
- Air flow direction can be adjusted vertically and horizontally. (See page 20 for instructions.)
- Temperature/Fan speed can also be adjusted (see step 3~4 on page 13 for instructions.)
- If you select Smart Saver function during Turbo/Long function, it will cancel the Turbo/Long function.

To deactivate the Smart Saver function.

1. Press the **Smart Saver** button on the remote controller.
   Smart Saver function will be canceled and Smart Saver indicator will disappear on the remote controller display.

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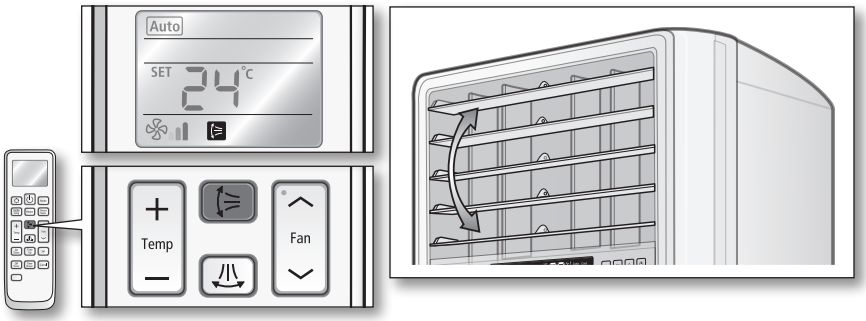
Using advanced functions

Adjusting the air flow direction

Air flow can be directed to your desired position.

Vertical air flow

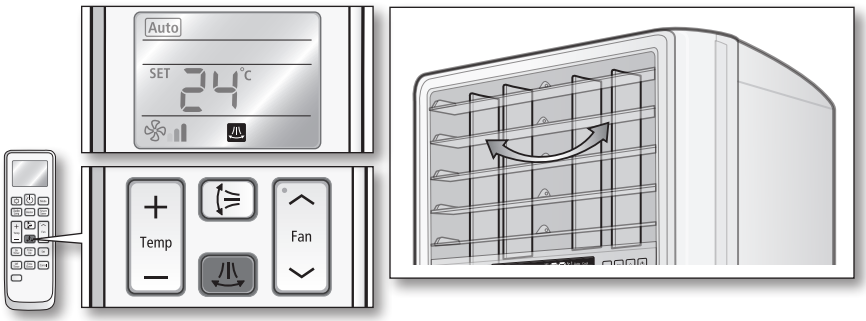
1. Press the **Air swing(Up/Down)** button on the remote controller.
   The air flow blades move up and down.
   To keep the air flow direction in a constant position, press the **Air swing(Up/Down)** button on the remote controller again.



NOTE When using the Long function, vertical air flow direction control is not possible.

Horizontal air flow

1. Press the **Air swing(Left/Right)** button on the remote controller.
   The air flow blades move right and left.
   To keep the air flow direction in a constant position, press the **Air swing(Left/Right)** button on the remote controller again.



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Setting timer

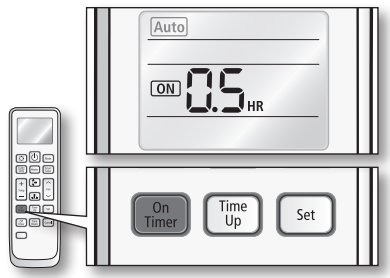
This advanced Timer function allows you to turn on/off your air conditioner automatically even when you are away. Simply set the time and your air conditioner will turn on/off automatically.

On Timer

This function allows you to turn on the air conditioner automatically within the time range of 24 hours.

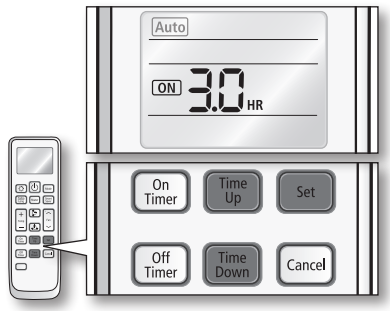
On timer is available while your air conditioner is off.

1. Press the **On Timer** button on the remote controller.
   On timer indicator blinks on the remote controller display.

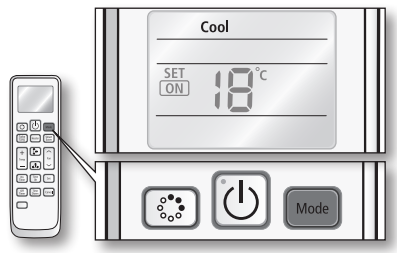


2. Set the time you want the air conditioner to turn on automatically.
   Press the **Time Up** or **Time Down** button on the remote controller to change the time setting while On timer indicator is blinking.
   You can set the time up to 24 hours, increasing in 30 minute unit up to first 3 hours and in hourly unit after first 3 hours.

3. Press the **Set** button on the remote controller to active it on.
   The remote controller display will show the hour(s) you have set for 3 seconds and set desired temperature will display.
   The air conditioner will operate automatically at set time and then On timer indicator stops blinking and stays on. If On timer is not set within 10 seconds, the air conditioner will end setting.



4. Set the operation mode.
   Press the **Mode** button on the remote controller until the desired mode appears on the remote controller display.
   The air conditioner will operate in the mode you set.



NOTE On time funtion is available in Auto/Cool/Dry/Fan and Heat* mode. (*Heat mode is applicable for AP50M1✳ model only.)

NOTE
- Temperature can also be adjusted (see step 3 on page 13 for instructions).
- All the indicators other than On Timer indicator will disappear approximately after 10 seconds after the setup.
- When the On Timer setting is done, you can press the **On Timer** button again to change the preset time. Press the **Time Up** or **Time Down** button to change time setting and then press the **Set** button to active it on.

To deactivate the On Timer

1. Press the **Cancel** button on the remote controller while On Timer is on.
   On timer you set will be canceled and On timer indicator will disappear.

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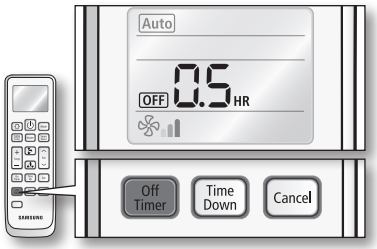
Using advanced functions

Off Timer

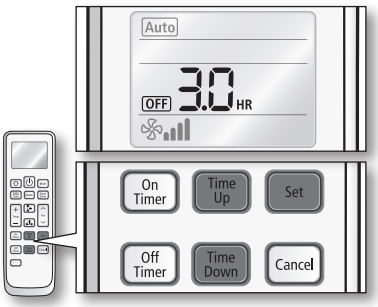
This function allows you to turn off the air conditioner automatically within the time range of 24 hours. Off timer is available while your air conditioner is on.

1. Press the **Off Timer** button on the remote controller.
   Off timer indicator blinks on the remote controller display.



2. Set the time you want the air conditioner to turn off automatically.
   Press the **Time Up** or **Time Down** button on the remote controller to change the time setting while Off timer indicator is blinking.
   You can set the time up to 24 hours, increasing in 30 minute unit up to first 3 hours and in hourly unit after first 3 hours.

3. Press the **Set** button on the remote controller to active it on.
   The remote controller display will show the hour(s) you have set for 3 seconds and set desired temperature will display. The air conditioner will operate automatically at set time and then Off timer indicator stops blinking and stays on. If Off timer is not set within 10 seconds, the air conditioner will end setting.



NOTE

- When the Off Timer setting is done, you can press the **Off Timer** button again to change the preset time. Press the **Time Up** or **Time Down** button to change the time setting and then press the **Set** button to active it on.
- You can combine Off timer function with On timer function to turn on and then off the air conditioner at the desired time (see page 23 for instructions).

To deactivate the Off Timer

1. Press the **Cancel** button on the remote controller while Off Timer is on.
   Off timer you set will be canceled and Off timer indicator will disappear.

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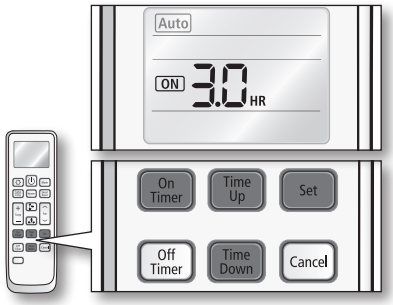
Combining On Timer and Off Timer

You can combine the On timer and Off timer together for more convenient use of the timer function.

1. Set the On timer.
   Press the **On Timer** button.
   Set the time with **Time Up** or **Time Down** button.
   Press **Set** button to activate the On timer.

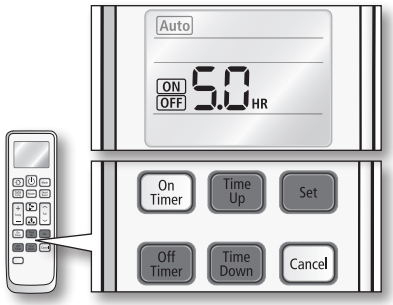


NOTE See page 21 for more detail instructions on setting On timer.

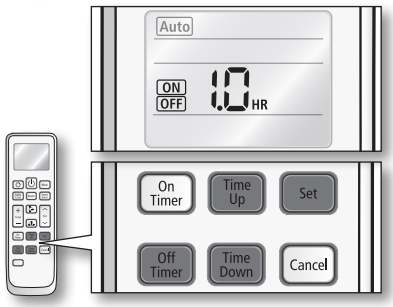
2. Set the Off timer.
   Press the **Off Timer** button.
   Set the time with **Time Up** or **Time Down** button.
   Press the **Set** button to activate the Off timer.

   When you set the time, there can be two possible options:

   Preset time of On Timer is shorter than Off Timer
   The air conditioner will turn on and then off automatically. Set up should be done while the air conditioner is off.
   ex.) If the preset time of the On Timer is 3 hours and the Off Timer is 5 hours, the air conditioner will turn on after 3 hours from the moment you have set the timer. Your air conditioner will remain on for 2 hours and then turn off automatically.



   Preset time of On Timer is longer than Off Timer
   The air conditioner will turn off and then on automatically. Set up should be done while the air conditioner is operating.
   ex.) If the preset time of the On Timer is 3 hours and the Off Timer is 1 hour, the air conditioner will turn off an hour after the moment you have set the timer. Your air conditioner will remain off for 2 hours and then it will turn on automatically.



NOTE See page 22 for more detail instructions on setting Off timer.

To deactivate the timer combination

1. Press the **Cancel** button on the remote controller while timer combination is on.
   Both of the On and Off timer will be canceled and the indicators will disappear.

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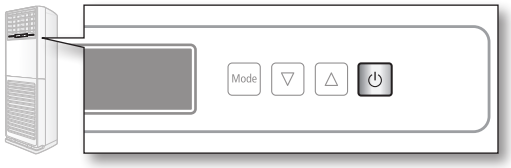
Using advanced functions

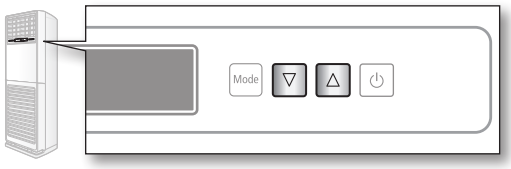
Using the air conditioner with the control panel

You can control the air conditioner without the remote controller.

1. Press the **Power** ⏻ button on the indoor unit control panel.
   You will hear a ringing sound and the air conditioner will operate in the most recent operation mode used or Auto mode.
   To turn off the air conditioner, press the **Power** ⏻ button again.

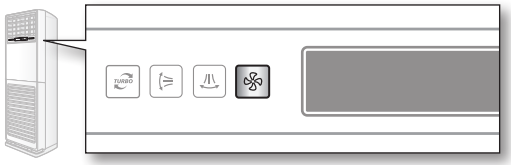


2. Press the ▽ or △ button to adjust the temperature.
   You can set the desired temperature between the range of 18℃~30℃ in Auto/Cool/Dry mode or 16℃~30℃ in Heat* mode. (*Heat mode is applicable in AP50M1✳ model only. You cannot set the desined temperature in Fan mode)



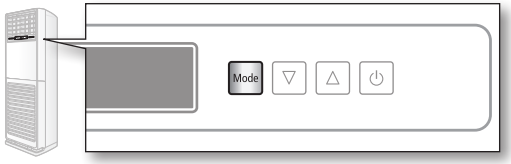
NOTE You can increase/decrease the temperature by 1℃.

3. Press the **Fan Speed** button to adjust the fan speed.



NOTE Each time you press the **Fan Speed** button, the fan speed will change in order of Auto( ), Low( ), Medium( ) and High( ).

4. Press the **Mode** button to select operation mode.
   You can select operation mode you want by pressing the **Mode** button.



NOTE Each time you press the **Mode** button, the mode will change in order of Auto/Cool/Dry/Fan and Heat*. (*Heat mode is applicable for AP50M1✳ model only.)

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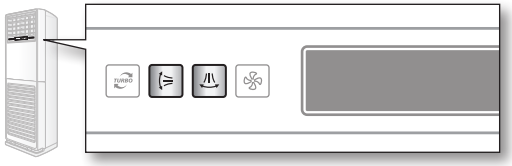
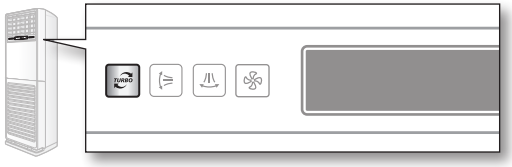
5. Press **Air swing (Up/Down)** or **Air swing (Left/Right)** button to adjust air flow direction.
   The air flow blades move up/down or left/right.
   To keep the air flow direction in a constant position, press the **Air swing (Up/Down)** or **Air swing (Left/Right)** button on the control panel again.



6. Press the **(Turbo)** button to select Turbo mode.
   The unit will operate in Turbo mode for 30 minutes.

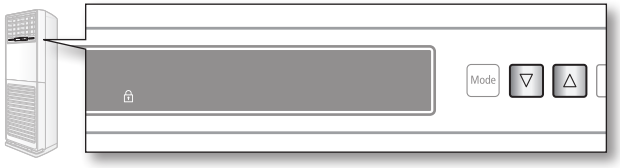


Locking the control panel

You can lock the control panel on the indoor unit to prevent the children from playing with the air conditioner.

When the air conditioner is on or off

1. Press the ▽ and △ buttons for 3 seconds.
   You will hear ring and the Lock indicator will appear on the indoor unit display.
   Once Lock is set, you cannot control the air conditioner with the control panel but you can only control it with the remote controller.
   To Unlock the control panel, press the ▽ and △ buttons again for 3 seconds.



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Cleaning and maintaining the air conditioner

CAUTION Make sure to turn off the circuit breaker when cleaning the air conditioner.

Cleaning the exterior

1. Wipe the surface of the unit with a slightly wet or dry cloth when needed.

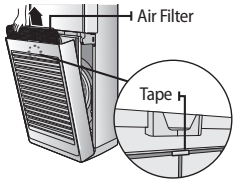
CAUTION Do not use Benzene, Thinner or Clorox™. They may damage the surface of the air conditioner and can create a risk of fire.

Cleaning the filter

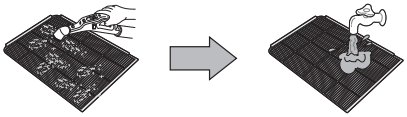
Air filter

Washable air filter captures large particles from the air.
The filter can be cleaned with a vacuum or by hand washing.

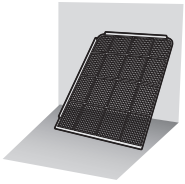
1. Open the panel and pull out the air filter after removing the tape that holds the air filter.
   Pull out the air filter in the direction of the arrow as shown in the below figure.



2. Clean the air filter with a vacuum cleaner or in running water.
   If dust is too heavy, use warm water mixed with detergent. Do not scrub the filter too hard since it may get damaged.



3. Dry the air filter in a ventilated area.
   Do not dry the air filter in a place with direct sunlight.



4. Insert the air filter back in its original position. Make sure it is firmly fixed.

NOTE Clean the air filter every two weeks. Cleaning term may differ depending on usage and environmental conditions.

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Maintaining your air conditioner

If the air conditioner will not be used for an extended period of time, dry the air conditioner to maintain it in best condition.

1. Dry the air conditioner thoroughly by operating in Fan mode for 3 to 4 hours and turn off the circuit breaker. There may be internal damage if moisture is left in components.
2. Before using the air conditioner again, dry the inner components of the air conditioner again by running in Fan mode for 3 to 4 hours. This helps remove odors which may have generated from dampness.

Periodical checks

Refer to the following chart to maintain the air conditioner properly.

Type	Description	Every 2 weeks	Every 3 months	Every 4 months	Once a year
Indoor unit	Clean the air filter (1)	●			
	Clean the condensate drain pan (2)				●
	Thoroughly clean the heat exchanger (2)				●
	Clean the condensate drain pipe (2)			●	
	Replace the remote controller batteries (1)				●
Outdoor unit	Clean the heat exchanger on the outside of the unit (2)			●	
	Clean the heat exchanger on the inside of the unit (2)				●
	Clean the electric components with jets of air (2)				●
	Verify that all the electric components are firmly tightened (2)				●
	Clean the fan (2)				●
	Verify that all the fan assembly is firmly tightened (2)				●
	Clean the condensate drain pan (2)				●

● : This check mark requires checking the indoor/outdoor unit periodically, following to the description to maintain the air conditioner properly.

NOTE

The checks and maintenance operations described are essential to guarantee the efficiency of the air conditioner. The frequency of these operations varies according to the characteristics of the area, the amount of dust, etc.

(1) The described operations should be performed more frequently if the area of installation is very dusty.

(2) These operations must always be performed by qualified personnel. For more detailed information, see the Installation part.

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Cleaning and maintaining the air conditioner

Internal protections via the unit control system

This internal protection operates if an internal fault occurs in the air conditioner.

Type	Description
Against cold air	The internal fan will be off to against cold air when the heat pump is heating.
Defrost cycle	The internal fan will be off to against cold air when the heat pump is heating.
Protect compressor	The air conditioner does not start operating immediately to protect the compressor of the outdoor unit after it has been started.

NOTE

If the heat pump is operating in Heat mode, defrost cycle is actuated to remove frost from an outdoor unit that may have deposited at low temperatures.

The internal fan is switched off automatically and restarted only after the defrost cycle is completed.

Storing the remote controller

When you do not use the remote controller for a long time, remove the batteries and store the remote controller in the remote controller holder.

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Appendix

Troubleshooting

Refer to the following chart if the air conditioner operates abnormally. This may save time and unnecessary expenses.

PROBLEM	SOLUTION
The air conditioner does not operate immediately after it has been restarted.	• Because of the protective mechanism, the appliance does not start operating immediately to keep the unit from overloading. The air conditioner will start in 3 minutes.
The air conditioner does not work at all.	• Check if the circuit breaker is switched off. • Check if there is a power failure. • Check your fuse. Make sure it is not blown out.
The temperature does not change.	• Check if you selected Fan mode. Press the **Mode** button on the remote controller to select another mode.
The cool(warm) air does not come out of the air conditioner.	• Check if the set temperature is higher (lower) than the current temperature. Press the **Temp** + or - button on the remote controller to change the set temperature. Press the **Temp** + or - button to increase or decrease the temperature. • Check if the air filter is blocked by dirt. Clean the Air filter every two weeks. • If the air conditioner has just been turned on or the indoor temperature reaches the desired temperature, only fan will operate around 3 minutes for the product protection. Also, just after you start the heating operation, warm air will come out after for a while to avoid cold air from coming out.
The fan speed does not change.	• Check if you selected Auto or Dry mode. The air conditioner automatically adjusts the fan speed to Auto in Auto/Dry mode.
Timer function does not set.	• Check if you press the **Set** button on the remote controller after you have set the time.
Odors permeate in the room during operation.	• Check if the appliance is running in a smoky area or if there is a smell entering from outside. Operate the air conditioner in Fan mode or open the windows to air out the room.
The air conditioner makes a bubbling sound.	• A bubbling sound may be heard when the refrigerant is circulating through the compressor. Let the air conditioner operate in a selected mode.
Water is dripping from the air flow blades.	• Check if the air conditioner has been cooling for an extended period of time with the air flow blades pointed downwards. Condensation may generate due to the difference in temperature.
Remote controller is not working.	• Check if your batteries are depleted. • Make sure batteries are correctly installed. • Make sure nothing is blocking your remote control sensor. • Check that there are strong lighting apparatus near the air conditioner. Strong light which comes from fluorescent bulbs or neon signs may interrupt the electric waves.
Smoke is generated from the outdoor unit.	• It may not be a fire but it can be a steam generated by the defrost operation from outdoor heat exchanger during Heat mode in winter.
Error is indicated.	• Contact the service center when the following errors are indicated. E1-01, E1-21, E1-22, E1-54, E1-62, E1-63, E2-37, E4-25

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Appendix

Operation ranges

The table below indicates the temperature and humidity ranges the air conditioner can be operated within. Refer to the table for efficient use.

MODE	OPERATIONAL TEMPERATURE		INDOOR HUMIDITY	IF OUT OF CONDITIONS
	INDOOR	OUTDOOR		
COOLING	18˚C to 32˚C	21˚C to 52˚C	80% or less	Condensation may occur on the indoor unit with risk to have either water blow off or drops on the floor.
HEATING	27˚C or less	0˚C to 24˚C	-	Internal protection triggers and the air conditioner will stop.
DRYING	18˚C to 32˚C	21˚C to 52˚C	-	Condensation may occur on the indoor unit with risk to have either water blow off or drops on the floor.

NOTE

The standardized temperature for heating is 7˚C. If the outdoor temperature drops to 0˚C or below, the heating capacity can be reduced depending on the temperature condition.

If the cooling operation is used at over 32˚C (indoor temperature), it does not cool at its full capacity.

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Safety precautions

Carefully follow the precautions listed as below because they are essential to guarantee the safety of SAMSUNG product.

WARNING

- Always disconnect the air conditioner from the power supply before servicing it or accessing its internal components.
- Verify that installation and testing operations are performed by qualified personnel.
- Verify that the air conditioner is not installed in an easily accessible area.

General information

- Carefully read the content of this manual before installing the air conditioner and store the manual in a safe place in order to be able to use it as reference after installation.
- For maximum safety, installers should always carefully read the following warnings.
- Store the manual in a safe location and remember to hand it over to the new owner if the air conditioner is sold or transferred.
- This manual explains how to install an indoor unit with a split system with two SAMSUNG units. The use of other types of units with different control systems may damage the units and invalidate the warranty. The manufacturer shall not be responsible for damages arising from the use of non compliant units.
- The manufacturer shall not be responsible for damage originating from unauthorized changes or the improper connection of electric and hydraulic lines. Failure to comply with these instructions or to comply with the requirements set forth in the "Operating limits" table, included in the manual, shall immediately invalidate the warranty.
- The air conditioner should be used only for the applications for which it has been designed: the indoor unit is not suitable to be installed in areas used for laundry.
- Do not use the units if damaged. If problems occur, switch the unit off and disconnect it from the power supply.
- In order to prevent electric shocks, fires or injuries, always stop the unit, disable the protection switch and contact SAMSUNG's technical support if the unit produces smoke, if the power cable is hot or damaged or if the unit is very noisy.
- Always remember to inspect the unit, electric connections, refrigerant tubes and protections regularly. These operations should be performed by qualified personnel only.
- The unit contains moving parts, which should always be kept out of the reach of children.
- Do not attempt to repair, move, alter or reinstall the unit. If performed by unauthorized personnel, these operations may cause electric shocks or fires.
- Do not place containers with liquids or other objects on the unit.
- All the materials used for the manufacture and packaging of the air conditioner are recyclable.
- The packing material and exhaust batteries of the remote controller(optional) must be disposed of in accordance with current laws.
- The air conditioner contains a refrigerant that has to be disposed of as special waste. At the end of its life cycle, the air conditioner must be disposed of in authorized centers or returned to the retailer so that it can be disposed of correctly and safely.

Installing the unit

IMPORTANT : When installing the unit, always remember to connect first the refrigerant tubes, then the electrical lines. Always disassemble the electric lines before the refrigerant tubes.

- Upon receipt, inspect the product to verify that it has not been damaged during transport. If the product appears damaged, DO NOT INSTALL it and immediately report the damage to the carrier or retailer (if the installer or the authorized technician has collected the material from the retailer).
- After completing the installation, always carry out a functional test and provide the instructions on how to operate the air conditioner to the user.

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Safety precautions

- Do not use the air conditioner in environments with hazardous substances or close to equipment that release free flames to avoid the occurrence of fires, explosions or injuries.
- Our units must be installed in compliance with the spaces indicated in the manual to ensure either accessibility from both sides or ability to perform routine maintenance and repairs. The units' components must be accessible and that can be disassembled in conditions of complete safety either for people or things. For this reason, where it is not observed as indicated into the manual, the cost necessary to reach and repair the unit (in safety, as required by current regulations in force) with slings, trucks, scaffolding or any other means of elevation won't be considered in-warranty and charged to end user.

Power supply line, fuse or circuit breaker

- Always make sure that the power supply is compliant with current safety standards. Always install the air conditioner in compliance with current local safety standards.
- Always verify that a suitable grounding connection is available.
- Verify that the voltage and frequency of the power supply comply with the specifications and that the installed power is sufficient to ensure the operation of any other domestic appliance connected to the same electric lines.
- Always verify that the cut-off and protection switches are suitably dimensioned.
- Verify that the air conditioner is connected to the power supply in accordance with the instructions provided in the wiring diagram included in the manual.
- Always verify that electric connections (cable entry, section of leads, protections…) are compliant with the electric specifications and with the instructions provided in the wiring scheme. Always verify that all connections comply with the standards applicable to the installation of air conditioners.

CAUTION

- Make sure that you earth the cables.
  - Do not connect the earth wire to the gas pipe, water pipe, lighting rod or telephone wire. If earthing is not complete, electric shock or fire may occur.
- Install the circuit breaker.
  - If the circuit breaker is not installed, electric shock or fire may occur.
- Make sure that the condensed water dripping from the drain hose runs out properly and safely.
- Install the power cable and communication cable of the indoor and outdoor unit at least 1m away from the electric appliance.
- Install the indoor unit away from lighting apparatus using the ballast.
  - If you use the wireless remote controller, reception error may occur due to the ballast of the lighting apparatus.
- Do not install the air conditioner in following places.
  - Place where there is mineral oil or arsenic acid. Resin parts flame and the accessories may drop or water may leak. The capacity of the heat exchanger may reduce or the air conditioner may be out of order.
  - The place where corrosive gas such as sulfurous acid gas generates from the vent pipe or air outlet. The copper pipe or connection pipe may corrode and refrigerant may leak.
  - The place where there is a machine that generates electromagnetic waves. The air conditioner may not operate normally due to control system.
  - The place where there is a danger of existing combustible gas, carbon fiber or flammable dust. The place where thinner or gasoline is handled. Gas may leak and it may cause fire.

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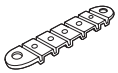
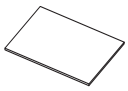
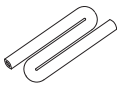
Accessory parts list

❋ Product illustration may look different from the actual product.

No.	Part Name	Quantity	Remarks
1	Fixing bracket for indoor unit 	2	Indoor unit
2	Remote controller	1	
3	Remote controller holder	1	
4	M4 X L12 screws	4	
5	M4 X L14 screws	4	
6	Batteries for remote controller	2	
7	Protective piping cover	1	
8	Insulation for piping 	1	
9	Insulation for drain hose 	1	
10	User and Installation manual	1	

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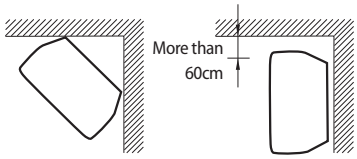
Selection of installation place

Indoor unit

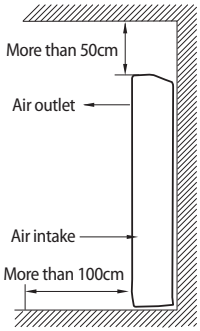
- Install the unit at a place close to the wall facing the outside as it is necessary to perform piping connection with the outdoor unit.
  - It is effective to install the unit at a window side to ensure uniform distribution of indoor temperature.
- Install the unit at a place where there is no obstacle against the wind around the air intake and air outlet.
- Install the unit horizontally at a stable, rigid place. (When installing the unit at a place subjected to oscillation, noise may occur.)
- Avoid a place near the door which is frequented by people.
- Avoid a place subject to direct sunlight.

Top view



[Corner installation] [Wall installation]

Side view



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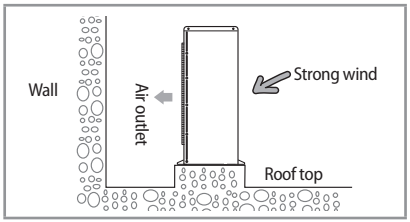
Outdoor unit

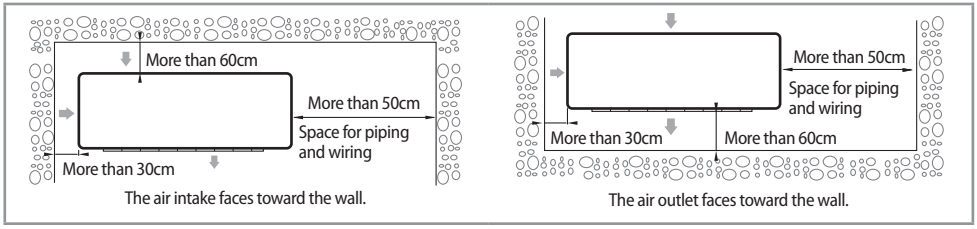
- A place free from the risk of combustible gas leakage.
- A place which can bear the weight of the unit.
- A place which can bear the fixing strength of the outdoor unit.
- Avoid a place subject to oil (including machine oil).
- Avoid a saline place.
- Avoid a place subject to sulfide gas (hot spring zone). (When installing the unit at such special environmental conditions, it may cause machine trouble. When it is unavoidable to use such places. It requires special maintenance.)
- A place where the discharge air and noise of the outdoor unit do not disturb the neighborhood. (Take special care not to cause any inconvenience to your neighbors when installing the unit on the borderline with your neighborhood.)
- A place where strong wind does not head against the air outlet of the outdoor unit. (If a strong wind heads directly against the air outlet at the time of cool operation, a safety device can be operated.)
- Do not install the outdoor unit at an unstable place such as outer wall of an apartment or building. The outdoor unit may fall down, causing severe personal or property damage or loss.

✻ If there is any unavoidable reason to install the unit at such a place, take the following measures against the wind;

1) When installing the unit at a roadside concentrated with buildings, install it parallel with the road.
2) Install the unit so that the air outlet faces toward the wall at a place such as rooftop, which may be subjected to strong wind.



- The outdoor unit should be installed in accordance with the service space.


More than 60cm
More than 50cm
Space for piping and wiring
More than 30cm
The air intake faces toward the wall.
More than 50cm
Space for piping and wiring
More than 30cm
More than 60cm
The air outlet faces toward the wall.

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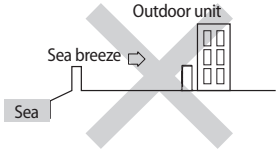
Preparing the installation

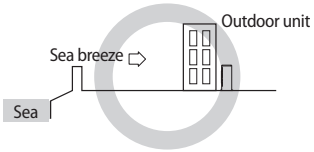
Selecting appropriate location for installation

Decide the installation location based on the following condition and obtain the user's approval.

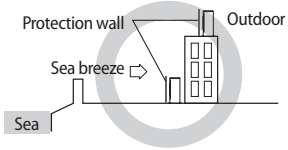
- ▶ Avoid a place that may disturb your neighbor. Noise may occur from the outdoor unit and the discharged air may run into the neighborhood. (Be careful of the operation time in a residential area)
- ▶ Install the outdoor unit on a hard and even area that can support its weight.
- ▶ Choose a flat place that rainwater does not settle or leak.
- ▶ Choose a place avoiding strong winds.
- ▶ Maintain sufficient space for repairs and service.
- ▶ Choose a place where you can easily connect the pipes and cables to the indoor unit.
- ▶ Make sure that the condensed water dripping from the drain hose runs out properly and safely.
- ▶ When installing the outdoor unit near seashore, make sure it is not directly exposed to sea breeze. If you can not find a adequate place without direct see breeze, protection wall should be constructed.

- ▶ Install the outdoor unit in a place (such as near buildings etc.) where it can be prevented from sea breeze which can damage the outdoor unit.





- ▶ If you cannot avoid installing the outdoor unit by the seashore, construct a protection wall around to block the sea breeze.



- Protection wall should be constructed with a solid material such as concrete to block the sea breeze and the height and the width of the wall should be 1.5 times larger than the size of the outdoor unit. Also, secure over 700mm between the protection wall and the outdoor unit for exhausted air to ventilate.

- ▶ Install the outdoor unit in a place where water can drain smoothly.

✻ If you cannot find a place satisfying above conditions, please contact manufacturer. Make sure to clean the sea water and the dust on the outdoor unit heat exchanger and spread corrosion inhibitor on heat exchanger. (At least one time per one year.)

- ▶ Choose a place where there is no direct sunlight.
- ▶ Choose a place where it could not come into contact with snow and rain.
- ▶ Choose a place where flammable gas does not leak.
- ▶ Choose a place where the indoor and outdoor unit can be connected with a pipe.

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WARNING

- After installing the outdoor unit, apply rust inhibitor on the internal pipes and heat exchanger.
  - If you don't apply rust inhibitor, airborne corrosive gas (such as sulfur compounds, hydrogen sulfide and ammonia) and salty dust may cause pipe corrosion which will lead to refrigerant leakage.
  - Inspect the outdoor unit at least once a year and re-apply the rust inhibitor where it is damaged (worn out).
- When applying the rust inhibitor, please be aware of the following:
  - Turn off the power before spraying the rust inhibitor.
  - Wear protective goggles and mask before spraying.
  - Clean the dusty surface with clean fabric or paper before spraying.
  - Make sure that wind is blowing from worker's back when spraying.
  - Do not spray on the PCB panel and electric parts.

CAUTION

- Install the indoor unit away from any interfering sources such as radio, computer, stereo equipment and also select the place where the electrical wiring work can be possible.
  - Especially keep the unit at least 3m away from the electrical equipment in an area electromagnetic waves generated and install the protection tube to protect the main power cable and communication cable.
  - Make sure that there is no equipment electromagnetic waves generate. If not, malfunction of the control system may occur due to the effect of the electromagnetic wave. (For example: The remote control sensor of the indoor unit may not be received well of electronic lighting style fluorescent lamps, such as fluorescent lamps are in the same space when using a remote control.)
- Make sure to install the outdoor unit in a safe place where snowfall will not be obstructed. The frame should be installed in a place where the air inlet and heat exchanger of the unit are not buried in the snow.
- A ventilation system may be required in the case the outdoor unit is installed in a closed space or room, even though R-410A is not poisonous or flammable.
- Install the railing around the outdoor unit to prevent falling when the unit is installed at high place of roof on the building.
- Avoid installing the units in places such as an exhaust pipe and ventilating opening exposed to corrosive gas, oxides of sulfur, ammonia gas or sulfur gas herbicides. (These places need additional anticorrosive treatments. Please contact manufacture to avoid corroding copper pipes or soldered parts)
- According to the condition of power supply, electric noise or unstable voltage can occur malfunction of electric parts or control system. (At the ship or places using power supply from electric generator… etc)

Space requirements

- The space suggested below is based on operating condition of outdoor temperature of 35°C. If operating condition of outdoor temperature is higher than 35°C, try to have more space.
- Make sure to clear a passage for a person and air flow.
- Observe the clearances and dimensions as seen below when installing the outdoor unit.
- If you install several outdoor units at the same place, observe the space for ventilation and free airflow.
- If the space for ventilation is insufficient, the air conditioner may not generate performance designed. Keep in mind that SAMSUNG logo is located on the front side of outdoor unit.

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Electrical work

The electrical work should be performed by a specialist qualified for the work.

- ▶ Use the three phase power supply, and be sure to install the sub power distributing board for exclusive use with the unit (separately purchased by the user).
- ✳ Avoid multiple connecting wiring as it can cause a drop in voltage, thus resulting in poor performance of the automatic control circuit.
- ▶ Be sure to install circuit breaker (separately purchased by the user).
- ▶ Be sure to connect the grounding wire.

NOTE

Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 66 / CENELEC:H07RN-F)

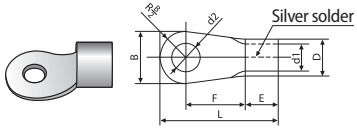
1. Remove the screw on the electrical component box and remove the cover plate.
2. Route the connection cord through the side of the indoor unit and connect the cable to terminals.
3. Route the other end of the cable to the outdoor unit through the ceiling & the hole on the wall.
4. Reassemble the electrical component box cover, carefully tightening the screw.

Wiring standard

Model		AP50M0✳ Series / AP50M1✳ Series
Power		3N~, 380-415V, 50Hz
Circuit breaker		Earth leakage circuit breaker(ELCB) 30A
Electric wire	Below 20m	2.5mm²
	Below 50m	4mm²
Allowable voltage		342~457V
Min. size of electric wires from/to the indoor/outdoor units		Below 20m : 0.75mm² Over 20m : 1mm²

CAUTION

- You must compress the solderless ring to the cable and then connect it to the main power terminal.
- Solderless ring selection



Thickness of cable (mm²)	B (mm)	d2 (mm)
2.5	Less than 9.5	More than 4.5
4	Less than 9.5	More than 4.5

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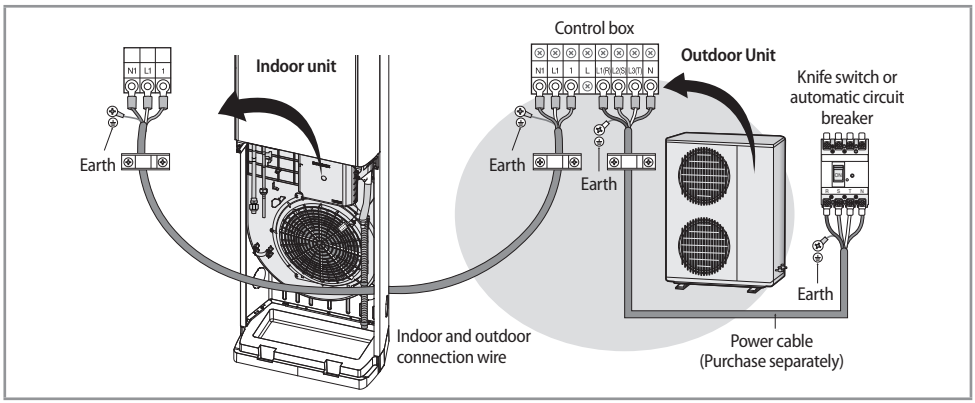
Indoor and outdoor connection wiring

- ▶ When connecting the wiring harness between the indoor and outdoor unit, align the outdoor side and the indoor side with the terminal board No.
- ✳ When the wiring harnesses of the indoor and outdoor unit are not properly connected, it may cause trouble. Be careful not to allow the indoor and outdoor wirings and power lines to get in contact with the service valve of the refrigerant system or to the pipe without an insulation.

AP50M0✳ Series

Using 4poles ELCB(Earth Leakage Circuit Breaker)

1. Remove the cover of electric box on side panel of the outdoor unit.
2. Connect the electric input wires [L1(R), L2(S), L3(T), N] to each terminal [L1(R), L2(S), L3(T), N] of the electric box on the outdoor unit respectively. (Input wires are purchased by the user separately.)
3. Connect the electric wires to each terminal on the indoor and outdoor unit respectively.



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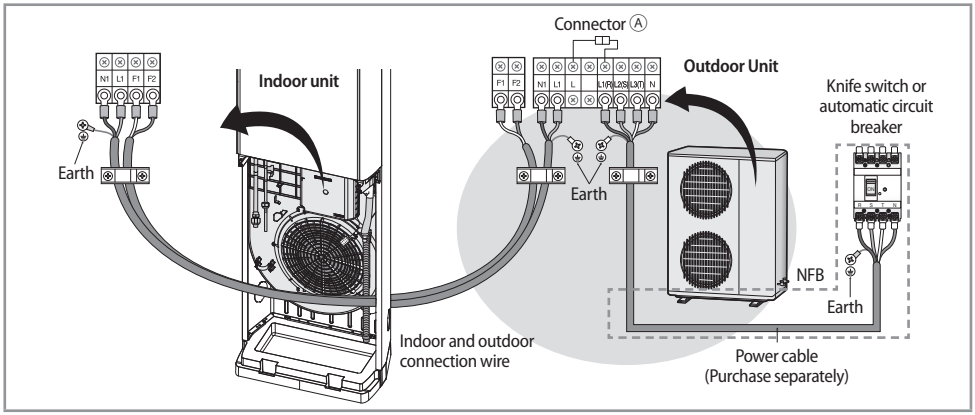
Electrical work

AP50M1✳ Series

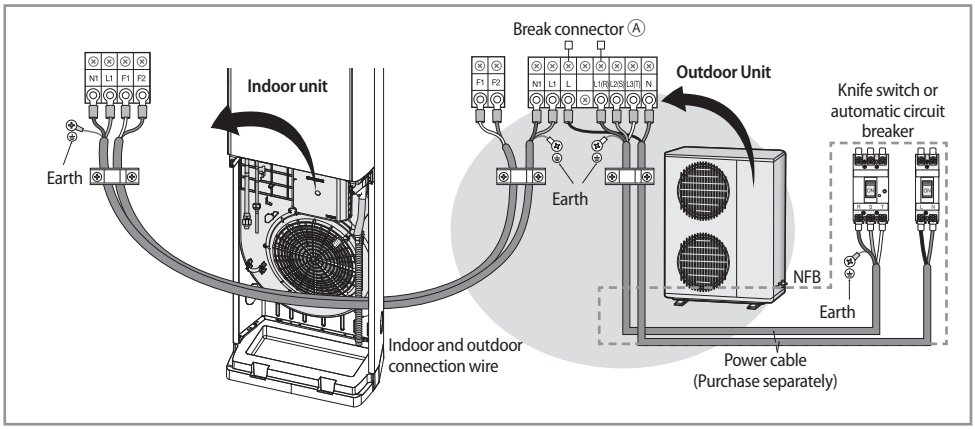
Using 4poles ELCB(Earth Leakage Circuit Breaker)

1. Remove the cover of electric box on side panel of the outdoor unit.
2. Connect the electric input wires [L1(R), L2(S), L3(T), N] to each terminal [L1(R), L2(S), L3(T), N] of the electric box on the outdoor unit respectively. (Input wires are purchased by the user separately.)
3. Connect the electric wires to each terminal on the indoor and outdoor unit respectively.



Using 3poles ELCB and 2poles ELCB

1. Remove the cover of electric box on side panel of the outdoor unit.
2. Disconnect the connector A(R-L connection) from the outdoor unit.
3. Connect the electric input wires[L1(R), L2(S), L3(T)] to each terminal[L1(R), L2(S), L3(T)] and input wires(N,L) to each terminal(N,L) of the electric box on the outdoor unit respectively. (Input wires are purchased by the user separately.)
4. Connect the electric wires to each terminal on the indoor and outdoor unit respectively.



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Electrical wiring

▶ Connect it to the terminal board N and L for power cable to the outdoor unit. In so doing, peel off the end of the power cord by about 5mm, and press the cord to the ring terminal for hooking.

- Make sure to install exclusive power supply. (If you use multiple connecting, there is a risk of electric shock or fire.)
- If the outdoor power supply has been selected, install circuit breaker(ELCB). (Purchase separately)
- Make sure to connect earth wire.
- Make sure that the clamping force of the screw (on the terminal) is tightened firmly within the range of rated tightening torque.
- The appliance shall be installed in accordance with national wiring regulations for installation (SASO 2007:2002).
- Disconnection means must be incorporated in the fixed wiring in accordance with the wiring rules.

Connecting the power terminal

▶ Connect the cables to the terminal board using the compressed ring terminal.

▶ Use rated cables only and make sure to fix them without applying any external force to the terminal.

▶ Connect the cables with driver and wrench that can apply the rated torque to the screws.

▶ Make sure that appropriate tightening torque is applied for cable connection. If the terminal is loose, arc heat may occur and cause fire and if the terminal is connected too firmly, terminal may get damaged.

Screw	Tightening torque (kgf·cm)
M3	5.0~7.5
M3.5	8.0~12.0
M4	12.0~18.0
M5	20.0~30.0
M6	25.0~37.5

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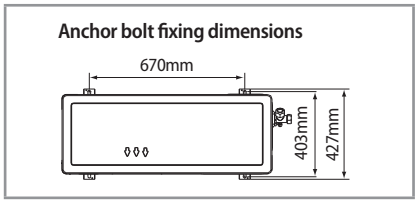
Installation method

Outdoor unit

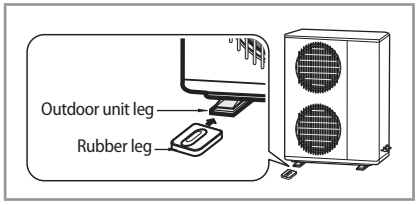
When using the anchor bolt

Fix the unit on a flat, rigid floor using the anchor bolt.
(Anchor bolt : M10 x 4 points - separately purchased)



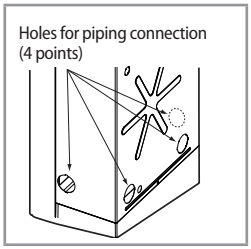
When using the rubber leg

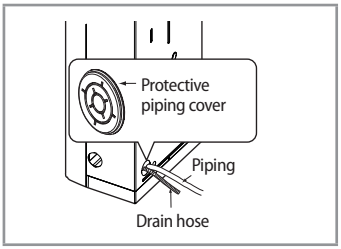
Put the rubber leg to the outdoor unit leg.



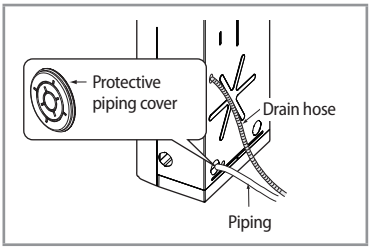
Installation procedures

1. The piping of this unit can be connected to the right, left, and rear side.
   - When you hit the area for piping connection slightly with a hammer, a hole is made.





When the hole on the wall is lower than the hole for piping connection.



When the hole on the wall is higher than the hole for piping connection.

2. Open the front panel and separate it from the unit.
   - Be careful of the power lines connected to control panel when removing.
3. Bend the connection pipe to an appropriate length using the spring bender depending upon the installation place.
   - Allowable pipe length : Maximum 25m
   - Allowable pipe drop distance : Maximum 15m
   - Make no more than ten bending points on the pipe

✻ When the pipe length is in excess of the standard pipe length of 5m, add the refrigerant (R-22) of 40g for each additional 1m.

CAUTION If the pipe is lengthened, the performance of the unit is degraded, and the service life is shortened. Therefore, the pipe length should be as short as possible (less than 25m).

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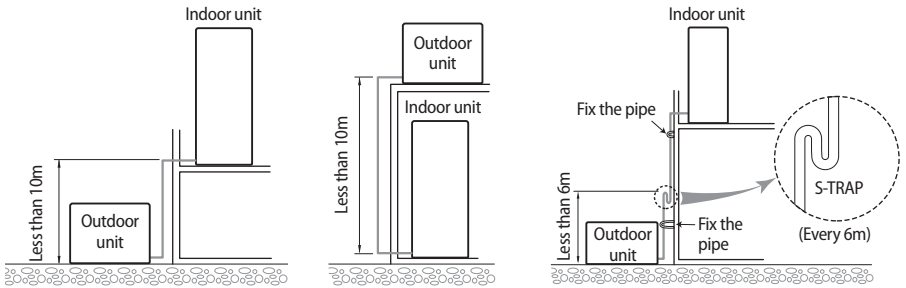
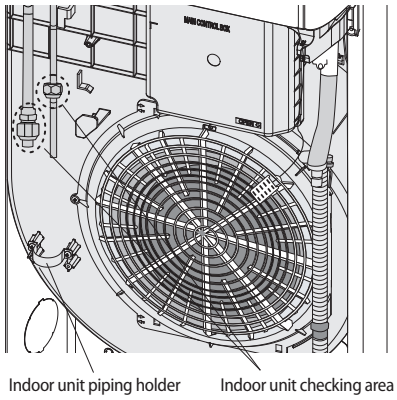
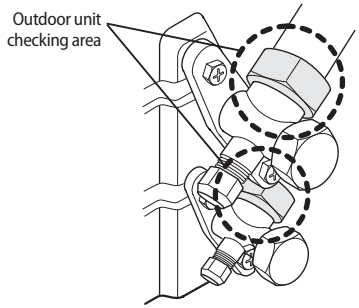


4. Install the high pressure pipe to the heat exchanger liquid pipe, and the low pressure pipe to the heat exchanger gas pipe respectively using the flare nut, taking care not to cause any leakage of refrigerant.
5. Be sure to insulate the pipe with appropriate insulation material.
6. Insert the extension drain hose to the drain connection port tightly, then fix them with a cable tie or a tape to prevent any water leakage; see page 46.
7. After completion of the installation, check the connecting area for any gas leakage.
8. Wind a finish tape when the wiring of the refrigerant pipe, the unit, and the drain piping are completed.
9. Fix the piping and drain hose by using the indoor unit piping holder.





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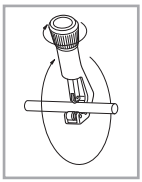
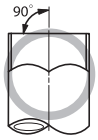
Installation method

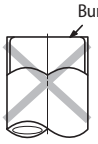
Connection of refrigerant piping

Flare processing

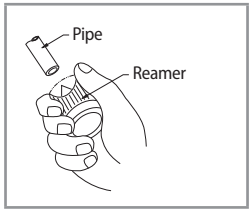
1. Cut the pipe using the pipe cutter.



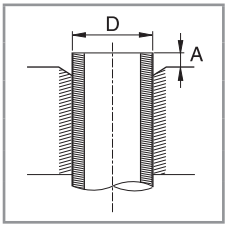




2. Remove burr on the edge of pipe.
   - If burr is not removed after cutting the pipe, there is a risk of refrigerant gas leakage.
   - If foreign substance such as burr goes into the pipe, there is a risk of product breakdown. Face the pipe downward when doing the work.



3. Insert the flare nut into the pipe, and then perform the flare processing.



Outer diameter D (mm)	A (mm)
ø 9.52	1.8
ø 19.05	2.2

Correct

Inclined

Damaged surface

Cracked

Uneven thickness

CAUTION When installing, make sure there is no leakage. When recovering the refrigerant, ground the compressor first before removing the connection pipe. If the refrigerant pipe is not properly connected and the compressor works with the service valve open, the pipe inhales the air and it makes the pressure inside of the refrigerant cycle abnormally high. It may cause explosion and injury.

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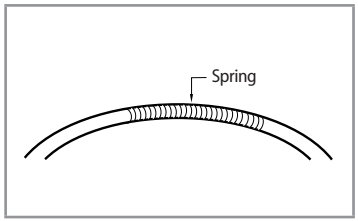
Pipe bending

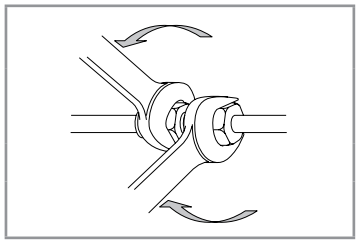
1. Perform bending of the pipe using the bender which has a specified bending radius.
2. Be sure to take full care to perform bending of the pipe successfully at one time. Bending and unbending the pipe more than twice makes the bending work increasingly difficult.
3. You may use the spring inserted into the gas pipe instead of the bender to bend the pipe.
4. When you bend the pipe using the spring, hold the pipe with both hands to prevent any distortion, and secure a minimum bending radius of more than 100mm.



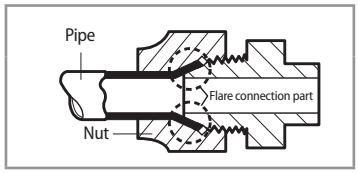
Tightening of connection parts

▶ Align the pipes to be connected and tighten the flare nuts first manually and then with a torque wrench, applying the following torque.

Outer diameter (mm)	Tightening torque (kgf·cm)
ø 9.52	250~280
ø 19.05	990~1210



▶ You can avoid of gas leakage by applying refrigerant oil on the flare connection part.

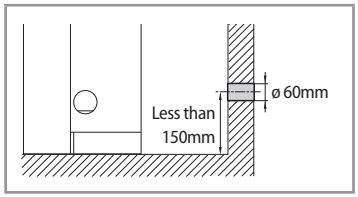


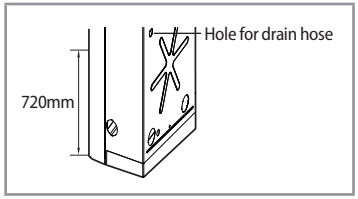
Drilling a hole in the wall

▶ Drill a hole of 60mm in diameter to the outside.

▶ The drilling should be done at a distance of less than 150mm from the floor facing the indoor unit.

✳ If a hole on the wall is above 150mm from the floor, use a hole for drain hose (ø35mm) for connecting drain hose.





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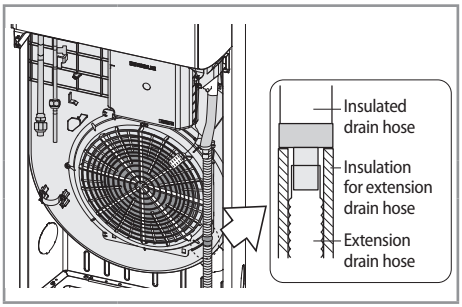
Installation method

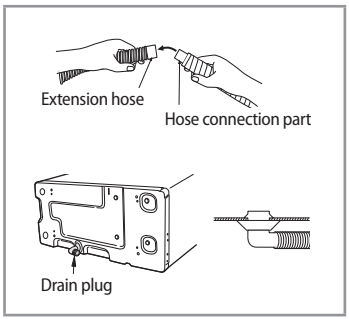
Drain hose

1. Connect the drain hose by inserting the extension drain hose to the drain connection port tightly.
2. Insulate the extension drain hose, then fix it with a cable tie or a tape.

Piping material	Vinyl chloride(Inner diameter ø13mm)
Insulation	Foamed polyethylene



3. Connect drain hose to the outdoor unit since water will be generated during heating or defrost operation. (Drain hose for outdoor unit should be purchased separately.)

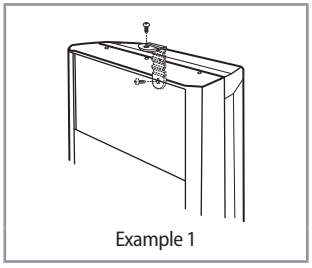


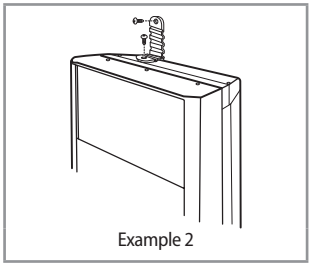
CAUTION
- As the draining is of natural drain type, make the drain hose direct downward.
- Fix the drain hose tightly to prevent any water leakage.
- If there is any foreign substance in the drain plate, it may clog the drain pipe. Therefore, be sure to remove the foreign substance inside after installation.
- Do not extend the drain hose.

Fixing the indoor unit

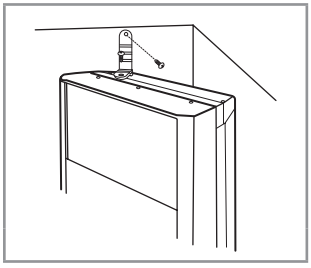
▶ If the indoor unit is installed on unstable place, it may shake or fall down. To prevent these accidents, you must fix the top of the indoor unit tightly with fixing brackets.

Wall installation


Example 1


Example 2

Corner Installation



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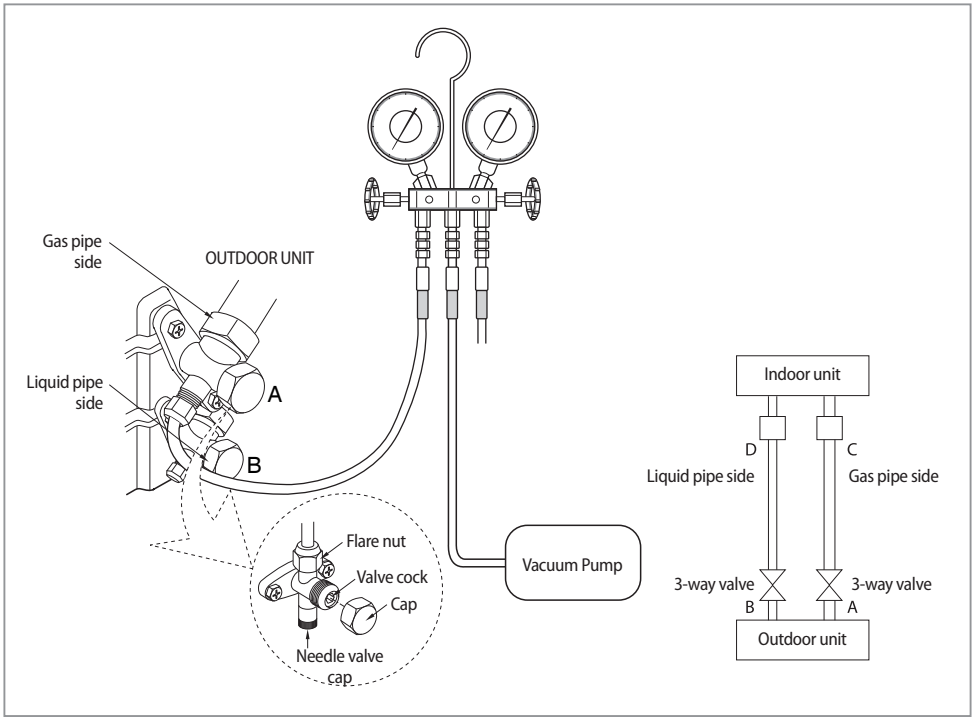
Air purge

❋ Be sure that all valve cocks are closed.

▶ The air in the indoor unit and in the pipe must be purged. Make sure to vacuum inside of the connection pipe using vacuum pump after connecting pipes.(Use vacuum pump as shown at the figure.) If air remains in the refrigeration pipes, it will affect the compressor, reduce to cooling capacity and could lead to a malfunction.

1. Connect each assembly pipe to the appropriate valve on the outdoor unit and tighten the flare nut.
2. Connect the charging hose of low pressure side of manifold gauge to the packed valve having a service port as shown at the figure.
3. Open the valve of the low pressure side of manifold gauge counter-clockwise.
4. Purge the air from the system using vacuum pump for about 10 minutes.
   - Close the valve of the low pressure side of manifold gauge clockwise.
   - Turn off the vacuum pump.
   - Make sure that pressure gauge show -0.1MPa(-76cmHg) after about 10 minutes.
   - This procedure is very important in order to avoid gas leak.
   - Remove the hose of the low pressure side of manifold gauge.
5. Set valve cork of both liquid side and gas side of packed valve to the open position.
6. Mount the cap and the needle valve cap to the valve (see the below illustration), and tighten them at the torque of 183kgf•cm with a torque wrench.
7. Check for gas leakage.
   - At this time, especially check for gas leakage from the 3-way valve's stem nuts, and from the service port cap.



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Refrigerant charging

How to add refrigerant

1. Connect manifold gauge to the gas side service valve.
2. Take the trial operation with the cooling trial operation mode.
3. Perform trial operation for longer than 10 minutes and add refrigerant based on the below pressure table.

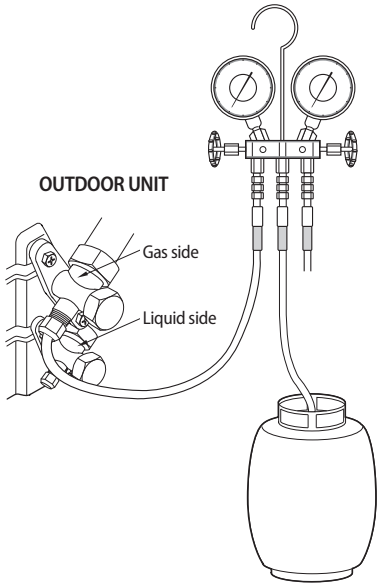
❋ Purpose of pressure table : If additional refrigerant filling is needed due to the leakage of the refrigerant or re-installation, add refrigerant using pressure table.

Pressure table for temperatures(AP50M0AN✳✳✳)

▶ Cooling operations

Pressure (Low pressure) [kPa, G]		Outdoor temperature (°C)		
		21	35	43
Indoor temperature (°C)	21	370	420	450
	23	380	430	460
	25	390	440	470
	27	390	460	490
	29	410	480	510
	31	420	500	540

4. Check the stability of the pressure for 10 minutes.



5. After adding refrigerant, fasten cap nuts firmly.

CAUTION
- Always use R-22 refrigerant to avoid damage of the unit or an explosion.
- Must keep the quantity of refrigerant by using a balance. Do not use a manometer or not depend on your experiences.

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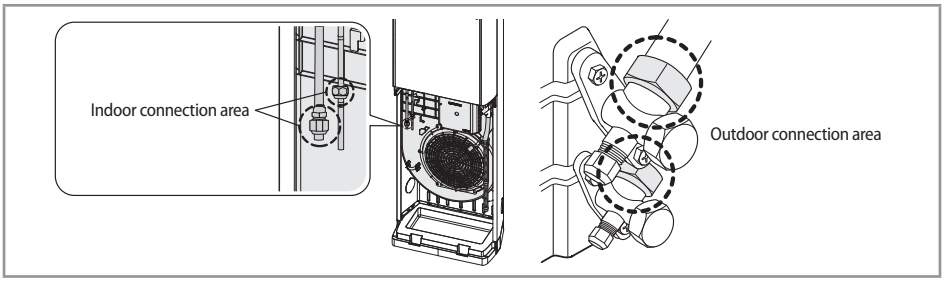
Check and test operation

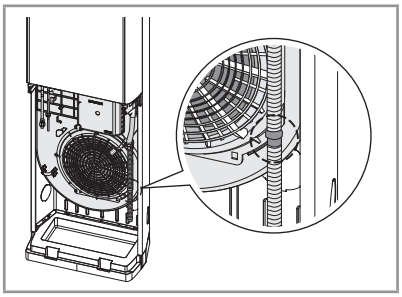
Check

▶ Be sure to check the following again after completion of installation.

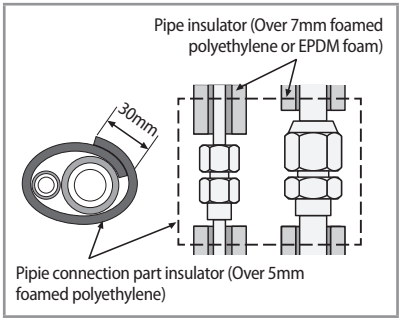
1. Check the piping connection area for any gas leakage.



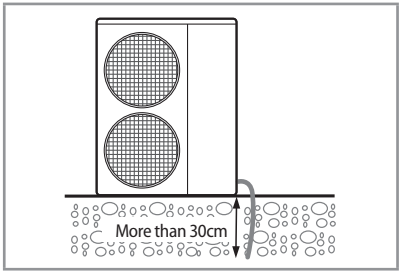
2. Is the drain hose properly connected?



3. Is the insulation of the piping in good condition?


Pipe insulator (Over 7mm foamed polyethylene or EPDM foam)
30mm
Pipie connection part insulator (Over 5mm foamed polyethylene)

4. Is grounding properly made?



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Check and test operation

Test operation

- ▶ After checking, read the owner's instructions carefully, and perform a test operation. Then deliver the unit to the customer. (When delivering the unit, be sure to read carefully and follow the contents of the owner's instructions.)
- ▶ Check if the indoor/outdoor unit's connection wires are properly connected.

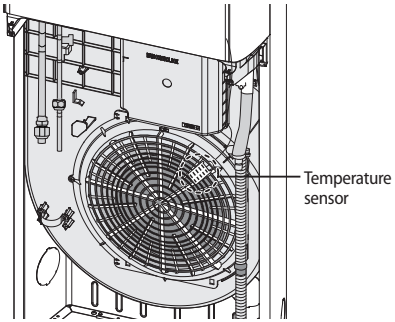
1. Turn on the air conditioner and select Cool mode. (Test is only available in cooling operation.)
   - Check if the cool air comes out from the indoor unit.
   - Check if the fan of outdoor unit rotates.
2. If the units don't work as above, check if the indoor/outdoor unit's connection wires are properly connected. The connection wires should be properly connected to the correct terminal number.

CAUTION

(1) Be sure to check whether the service valve is open before attempting to perform the test operation.

(2) Be sure to perform the test operation after installation. It is easy to start the test operation in winter if you increase the sensor temperature to 23℃ ~ 25℃ by holding the indoor temperature sensor. (Cooling operation)

❋ When the outdoor temperature is below zero, do not test operation for more than 3 minutes. Otherwise, the compressor will be damaged.



Pump down procedure (When removing the product)

1. Turn on the air conditioner and select Cool mode to run the compressor for 3 minutes.
2. Release the valve caps on High and Low pressure side.
3. Use L wrench to close the valve on the high pressure side.
4. Approximately 2 minutes after, close the valve on the low pressure side.
5. Stop operation of the air conditioner.
6. Disconnect the pipes.

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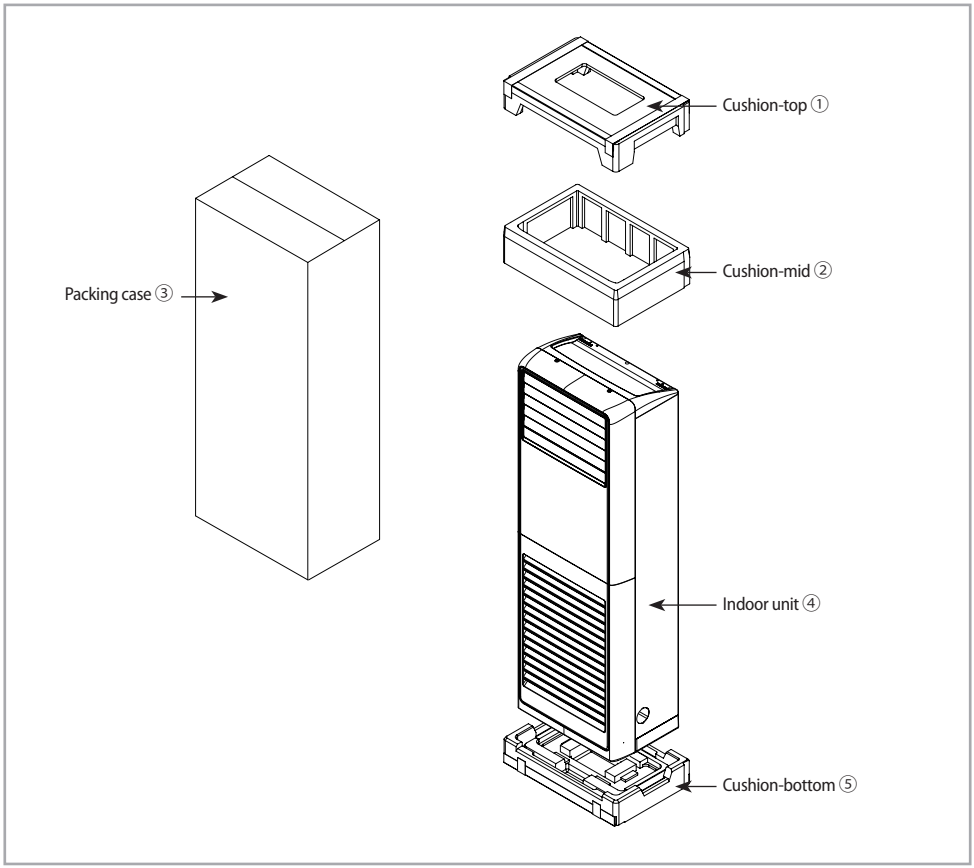
Packing and unpacking guide

Indoor unit



► Packing the unit as below procedure

1. Put the indoor unit ④ onto the cushion-bottom ⑤.
2. Assemble cushion-mid ② of indoor unit ④.
3. Put the cushion-top ① onto the indoor unit ④.
4. Put the packing case ③ from the top of set.
5. Seal the packing case ③.

► Unpacking the unit as below procedure

1. Take out the packing case ③ from the set.
2. Take out the cushion-top ①.
3. Take out the cushion-mid ②.
4. Move the set from the cushion-bottom ⑤.

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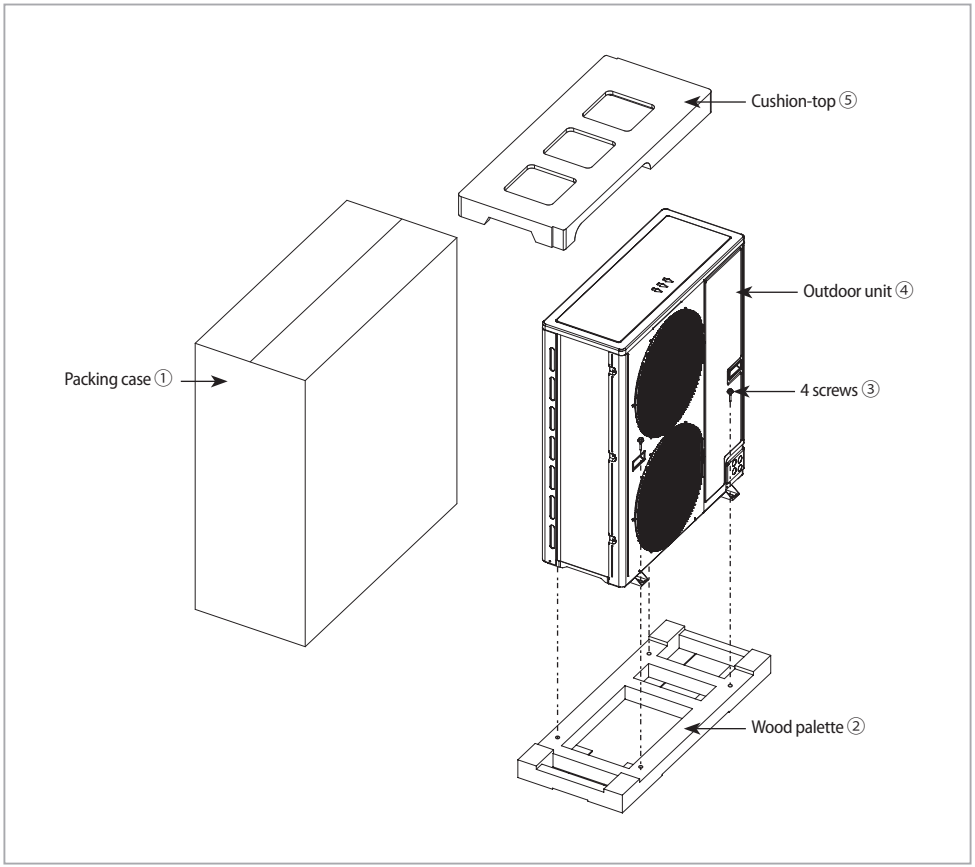
Packing and unpacking guide

Outdoor unit



► Packing the unit as below procedure

1. Fix the outdoor unit ④ and the wood palette ② by 4 screws ③.
2. Put the cushion-top ⑤ onto the outdoor unit ④.
3. Put the packing case ① from the top of set.
4. Seal the packing case ①.

► Unpacking the unit as below procedure

1. Take out the packing case ① from the set.
2. Take out the cushion-top ⑤.
3. Unscrew 4 screws ③ from the wood palette ② and then move the set.

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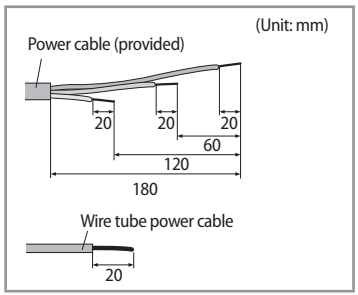
How to connect your extended power cables

❋ Items to prepare (compressor and insulation tape should be prepared by an installation technician.)

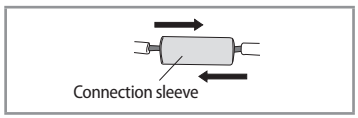
Tools	Crimping plier	Connection sleeve (mm)	Insulation tape	Contraction tube (mm)
Spec	MH-14	20 x ø7.0 (H x OD)	Width 18mm	50 x ø8.0 (LxOD)
Shape				

1. As shown in the figure, peel off the shields from the rubber/wire of the power cable.
   - Peel off 20 mm of the wire shields of the tube installed already.

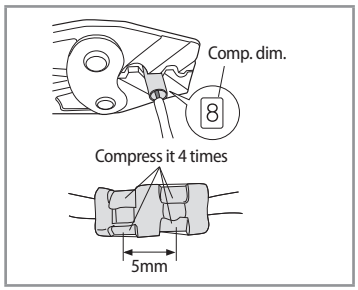
CAUTION After peeling off the tube wire, you must insert a contraction tube.



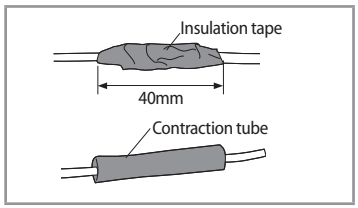
2. Insert both sides of core wire of the power cable into the connection sleeve.



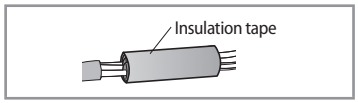
3. Using a compressor, compress the two points and flip it over and compress another two points in the same location.
   - The compression dimension should be 8.0.
   - After compressing it, pull both sides of the wire to make sure it is firmly pressed.



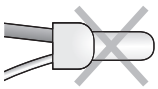
4. Wrap it with the insulation tape twice and position your contraction tube in the middle of the insulation tape.
5. Apply heat to the contraction tube to contract it.



6. After tube contraction work is completed, wrap it with the insulation tape to finish.



WARNING In case of extending the electric wire, please DO NOT use a round-shaped pressing socket.
- Incomplete wire connections can cause electric shock or a fire.



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